

5
2.10

By the same Author,

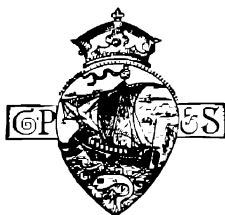
PRACTICAL HINTS ON INFANT SCHOOL WORK. •

Crown 8vo, cloth, 1s

THIS Book will be found of great value to Teachers of Infant Schools and Infant Classes, in showing them the kind of work done in some of the best Infant Schools

PRACTICAL HINTS
ON
ELEMENTARY SCHOOL WORK.

BY
AN EXPERIENCED EXAMINER.



New Edition.

LONDON:
GEORGE PHILIP & SON, 32 FLEET STREET, E.C.
LIVERPOOL · CAXTON BUILDINGS, SOUTH JOHN STREET,
AND 45 TO 61 SOUTH CASTLE STREET.
1885.

[ALL RIGHTS RESERVED]

University of California, Berkeley
Acct. 28463 Date 19/7/01

P R E F A C E .

THE author does not intend that this little manual should be looked upon as a Treatise on School Management, but simply as a collection of hints for Teachers, based on his experience as an Examiner of all kinds of Elementary Schools in a large and populous district. Neither is it assumed that any methods, herein advocated, are necessarily the best, but they are simply mentioned as having produced good results in schools, which have come under the author's notice.

The Revised Instructions to Inspectors (1884), and the reports of Her Majesty's Inspectors, as published in the Blue Books, have been freely consulted, and extracts quoted. The remarks on Music and Singing embody the latest Instructions to Inspectors as to Examination in Singing, which are stated in Circular 246, bearing the date 29th November 1884.

In presenting these hints to the great body of Teachers, the author trusts they may be found useful in removing some of the difficulties which are often met with in conducting an Elementary School, and in giving a general idea of what is expected in an "Excellent" school.

A companion book of "Practical Hints on Infant School Work" is now ready. This will, it is hoped, be of great service to Teachers of Infant Schools and Infant Classes, in showing the kind of work done in some of the best Infant Schools.

April, 1885.

A. W. ST. JOHN.

CONTENTS.

Section.	Page.
I. Merit Grant - - - - -	1
II. Organization and Discipline - - - - -	4
III. Registration - - - - -	7
IV. Reading - - - - -	9
V. Writing - - - - -	21
VI. Spelling - - - - -	25
VII. Composition - - - - -	28
VIII. Arithmetic - - - - -	31
IX. Class Subjects - - - - -	46
X. English - - - - -	50
XI. Grammar - - - - -	52
XII. Geography - - - - -	65
XIII. Music and Singing - - - - -	72
XIV. The Annual Examination - - - - -	79

ON

ELEMENTARY SCHOOL WORK.

I.

The distinguishing feature of the New Code (1882) is the award of what is called the *Merit Grant*, amounting to 1s., 2s., or 3s., if the Inspector, allowing for the *special circumstances*, reports a school for older children to be fair, good, or excellent, in respect of—

- (1) the organization and discipline ;
- (2) the intelligence employed in instruction ;
- (3) the general quality of the work, especially in the elementary subjects.

The Code states that the Inspector will bear in mind, in reporting on the organization and discipline, the results of any visits without notice made in the course of the school-year, and will not interfere with any method of organization adopted in a Training College under inspection if it is satisfactorily carried out in the school. To meet the requirements respecting discipline, the managers and teachers will be expected to satisfy the Inspector that all reasonable care is taken, in the ordinary management of the school, to bring up the children in habits of punctuality, of good manners and language, of cleanliness and neatness, and also to impress upon the children the importance of cheerful obedience to duty, of consideration and respect for others, and of honour and truthfulness in word and act. The Inspector will also satisfy himself that the teacher has neither with-

held scholars improperly from examination, nor unduly pressed those who are dull or delicate in preparation for it at any time of the year; and that in classifying them for instruction, regard has been paid to their health, their age, and their mental capacity, as well as to their due progress in learning.

Awarding
of the Merit
Grant

The awarding of the Merit Grant is left entirely to Her Majesty's Inspectors, and is one of the most grave and difficult tasks imposed upon them. In view of this responsibility the following general instructions have been issued for their guidance—

Instruc-
tions to
H. M. In-
spectors.

Schools not
entitled to
merit grant.

"From bad or unsatisfactory schools it is manifest that the merit grant should be withheld altogether. The cases which you dealt with under Article 32 b. of the former Code, and in which a deduction of one or more tenths was made for "faults of instruction or discipline," or in which you have not recommended the grant for "discipline and organization," would of course fall under this head. Other cases will occur which are not serious enough to justify actual deduction; but in which you observe that there is a preponderance of indifferent passes, preventable disorder, dulness, or irregularity; or that the teacher is satisfied with a low standard of duty. To schools of this class no merit grant should be awarded. But a school of humble aims, which passes only a moderately successful examination, may properly be designated "Fair" if its work is conscientiously done, and is sound as far as it goes; and if the school is free from any conspicuous fault.

Fair schools.

Good schools.

"Generally, a school may be expected to receive the mark "Good," when both the number and the quality of the passes are satisfactory; when the scholars pass well in such class subjects as are taken up; and when the organization, discipline, tone, and general intelligence are such as to deserve commendation.

Excellent
schools.

"It is the intention of their Lordships that the mark "Excellent" should be reserved for cases of distinguished merit. A thoroughly good school in favourable conditions is characterised by cheerful and yet exact discipline, maintained without harshness, and without noisy demonstration of authority. Its premises are cleanly and well-ordered; its time-table provides a proper

variety of mental employment and of physical exercise, its organisation is such as to distribute the teaching power judiciously, and to secure for every scholar—whether he is likely to bring credit to the school by examination or not—a fair share of instruction and of attention. The teaching is animated and interesting, and yet thorough and accurate. The reading is fluent, careful, and expressive, and the children are helped by questioning and explanation to follow the meaning of what they read. Arithmetic is so taught as to enable the scholars not only to obtain correct answers to sums, but also to understand the reason of the processes employed. If higher subjects are attempted, the lessons are not confined to memory work and to the learning of technical terms, but are designed to give a clear knowledge of facts, and to train the learner in the practice of thinking and observing. Besides fulfilling these conditions, which are all expressed or implied in the Code, such a school seeks by other means to be of service to the children who attend it. It provides for the upper classes a regular system of home exercises, and arrangements for correcting them expeditiously and thoroughly. Where circumstances permit, it has also its lending library, its savings' bank, and an orderly collection of simple objects and apparatus adapted to illustrate the school lessons, and formed in part by the co-operation of the scholars themselves. Above all, its teaching and discipline are such as to exert a right influence on the manners, the conduct, and the character of the children, to awaken in them a love of reading, and such an interest in their own mental improvement as may reasonably be expected to last beyond the period of school life."

II.

ORGANIZA-
TION AND
DISCIPLINE.

The organization of schools depends so much on the local conditions under which each school is worked, that very little can be said except in general terms. In the organization of a school attention must be paid to the size and shape of the school, the presence or want of class-rooms, the teaching staff, the classification, the time-table, furniture and apparatus, arrangements for drill and exercises, and everything that tends to make the school-room and its scholars orderly. Too much importance cannot be attached to the *organization* of a school, for on this greatly depends the *discipline*, and on the two conjointly, to a great extent, depend the *results*. A very general fault of organization is the absence of any provision for the head teacher to properly supervise the work of his subordinates, and in schools where this is not done, but where the head teacher's attention is confined to a section of the school, the results are, as a rule, unsatisfactory.

Good organization is a very powerful aid to good discipline, and without good discipline it is impossible to produce the best results. The objects at which discipline aims are—(1) order ; (2) attention ; (3) obedience ; (4) industry ; (5) good manners.

If the discipline of a school be unsatisfactory, the teacher has no comfort or peace, the pupils are unhappy, and habits of disorder are fostered. It is often remarked that, as the teacher so is the school, and in nothing is this more true than with regard to discipline. When teachers are themselves noisy in their talk, slovenly in their habits and dress, not sufficiently respectful to others, and regardless of rules, how can they expect their pupils to do otherwise than to follow the example set them ?

ELEMENTARY SCHOOL WORK.

Young minds are very active, and if they be not directed into a proper groove, they will find a channel for themselves, by which to

Much disorder in school arises from the fact that the children are not kept well employed. Teachers should make their pupils understand that they have come to school to work—that there is a proper time for work as well as for play. The school must be looked upon by teachers and scholars as essentially a place for *work*—pleasant and cheerful work—but on no account should it be converted into a play-house. Some teachers seem quite unconscious of the disorder which exists in their schools, and one frequently sees a teacher talking to a class of children, many of whom are chatting, some staring vacantly at the teacher, others fighting, &c., and but few profiting by the instruction given.

The order of a school is very important, and little things which are often unnoticed by teachers have a great influence on an Inspector in his estimate of the school. The children should sit or stand in an orderly way, attend to whatever work may be in hand, and should not be allowed to throw bits of paper, drops of ink, &c., on the floor. They should pass books, cards, &c., carefully from hand to hand, and not throw them across the class, as is sometimes done. The maps, diagrams, &c., should hang in an orderly manner. The windows, furniture, &c., should be clean and in good repair, and the rooms properly ventilated by opening the windows or ventilators. This is a point too frequently neglected, and much sickness undoubtedly occasioned by it. All teachers are not naturally endowed with the ability to secure the *attention* of their pupils, but much can be done by careful and painstaking endeavours. Attention should not be spasmodic, but constant. If it be not so, the efforts made by the teacher to secure attention tend to make the children restless and fitful. Where the teacher is noisy, the

children are noisy, and the work is carried on with correspondingly increased difficulty. One frequently hears in schools a constant "buzz" of talking while the children are apparently hard at work. It is difficult to detect the offender, for all seem to be thinking aloud. Great care is needed to check this habit, and no effort should be spared to eradicate it. It is often supposed to be the "busy hum" of work, which, by the way, is quite unnecessary and unpleasant, especially when the children are allowed to "hum" so loudly that the other children can hear the figures, &c., which are being calculated. Surely those who toil away, day after day, in the midst of such confusion, have never been in a school where the work is carried on quietly and cheerfully, or they would not impose upon themselves such burdensome conditions.

One great element of success in schools is a cheerful *sympathy* between teachers and pupils. Where this exists the children obey from *love*, and not from *fear*, and every action is performed with willing obedience. The sharp, curt manner in which some teachers address their scholars, is neither pleasant to listen to, nor likely to secure affection. Such rough ways may show authority, but it is that kind of authority which ends in discontent and rebellion. The teacher's orders should be firm, but kind, and acts of disobedience should be duly noticed.

Teachers have great influence in framing the mind and in the building up of character, and it is their duty to inculcate, by precept and example, habits of punctuality, order, industry, obedience, and good manners. Boys are naturally more rough than girls, and consequently require more attention in this respect. Unfortunately the rudeness of boys is but too prominent, both in school and in the playground, and this remark applies not more to individual boys in a school than to whole schools, so that it is evident little moral training has been accomplished.

III.

Registration is a very important part of the school work, and teachers cannot be too careful in meeting the requirements of the Education Department. Every school should be provided with all the books named in Circular 217 on "Registers, and how to keep them." In selecting Class Registers of Attendance teachers should be careful to avoid the choice of such as do not fulfil the requirements, the most common breach being that in which the attendance of the afternoon is marked under that of the morning. Registers containing such an arrangement are condemned in many districts. The Admission Register should be filled up, if possible, when a child is admitted, the name being entered in the index at once, to prevent omission; the practice of making up the Admission Register at the end of the week or month should be discarded, as teachers have frequently brought blame upon themselves by so doing. On receipt of the Duplicate Examination Schedules, the dates of passing successive standards should be entered in its proper column. Many of the old Admission Registers do not make provision for this, but it should be noted that, since the abolition of the Child's School Book, it is a matter of great importance. The Summary must be made up *weekly*. Some teachers do not properly estimate the gravity of erasures in the Registers. Mistakes will occasionally occur, and these should be corrected in some form which is open and visible at a glance.

Now that all the names which have been on the books during the last 22 working weeks of the school year must be entered in the Examination Schedule, teachers would make it much easier for

themselves and for Inspectors if they would adopt some such plan as the following :—The commencement of the 22 weeks in an ordinary school year (uninterrupted by epidemics, &c.) will be at or near the beginning of the 3rd quarter of the year, and the names of all children transferred from the 2nd quarter + the names of those admitted during the 3rd quarter up to the beginning of the 22 weeks, will be on the schedule if they remain in the school. These names should be written in *black* ink, and the names of all admitted after the 22 weeks have commenced should be entered in *red* ink. When the names are transferred from the 3rd quarter to the 4th, they should be written in the *same colour*, and bear the *same number* on the Register in both quarters, the numbers of any children who have left during the 3rd quarter remaining blank in the 4th quarter. The last quarter of the Registers will then show at a glance, both to Inspector and teacher, the names to be entered on the schedule.

IV.

Reading is universally acknowledged as the most important sub-READING.
 ject taught in an elementary school, nor can its supremacy be
 denied, for its effects are the most lasting, and it is the door to every
 edifice of learning, the high-road to every field of thought. Reading
 should be considered as a means by which a child, on leaving
 school, may instruct himself, so that his education and mental
 improvement may not cease with his school days. On this account,
 teachers should so teach the subject as to create a taste for reading,
 and at the same time give such hints as shall be the means of
 suitably gratifying this taste. How can a taste for reading be
 cultivated if children are not taught to read intelligently? That
 this is not done is unfortunately a fact which Her Majesty's Inspec-
 tors abundantly testify in their reports on the schools visited
 by them.

If the reading in our schools be as bad as is generally represented, Methods of
 steps should be taken to ascertain the cause, and promptly remove it. teaching
 reading.

"The reading is bad," says Mr. Holmes, in the Blue Book, because
 "the methods by which reading is taught are in many cases radically
 unsound. The teaching of reading may be looked at from two
 points of view. In the first place, the child must read the right
 thing; in the second place, he must read in the right way; and
 from the teacher's point of view it is of greater importance that
 children should read in the right way than that they should read
 the right thing."

"Good reading, besides being accurate and well expressed, must be Character-
 audible, distinct, and intelligent." The pass for reading is in a great istics of
 measure secured by accuracy; but the other factors, which may be good
 reading.

said to constitute the *style* of the reading, are largely taken into account in the award of the Merit Grant, and therefore must be carefully cultivated. If a child reads *intelligently*, he is most likely to read with good *expression*, and *distinctly*; and again, "the child who has been taught to read with the right *intonation* and *emphasis* has also been taught to speak *audibly* and *distinctly*, and to enter into the meaning of what he reads. Reading that is properly emphasized is sure to be audible; indeed monotony is the chief cause of inaudibility, it being impossible to distinguish between word and word when all are stressed alike; and by teaching children to modulate their voices according to the sense of each sentence and the force of each word, we are teaching them, *unknown to themselves*, to enter with insight and sympathy into the meaning of what is read."

"Intelligent" reading.

The "Revised Instructions to Inspectors" (1884) clearly state, that in every standard *intelligent* reading is required, and that a mere repetition of words, without intelligence, will not secure a pass, even in Standard I. How is this intelligence tested? Not by asking questions on the subject matter read, for the same Instructions say that the pass must not depend on this, but chiefly by—

- (a) The manner in which the children group their words into phrases.
- (b) Pausing naturally, and not by a slavish attention to printers' punctuation.
- (c) Suitable modulation of the voice, not according to mechanical rules.
- (d) Reading "sense," and not "nonsense."

That the above mentioned points are not sufficiently attended to in many schools, Inspectors are, unfortunately, too often conscious. As long as so many Infant School teachers continue to

teach reading by wrong methods, we shall have the jerky, monotonous, "sing-song" stuff so common, unless the teachers of Senior Schools uproot it in the low standards. The admirable remarks by Mr. Blakiston on this point are here quoted :—

"In my last report on the teaching of reading, I expressed a hope that I might be able to report the final extinction of the absurdity of bidding a child spell a word when he fails to read it off at sight. This practice is slowly dying out, but I have still too often to point out to the unthinking that the so-called "alphabetic system" involves a serious waste of time and toil. My advice is never to ask for the spelling of a word *before* it is sounded, but if none of the class can read it, so to break it up as to lead the children to combine the sounds of symbols with which they are familiar. This is the well known combination of the "phonic" and "look and say" methods which has long been practised by the most successful infant teachers, and which I hope soon to find universal. The phonic system, pure and simple, has gradually died out in the few schools into which it was introduced four years ago.

"Were those who allow or even encourage children to spell words *before* reading them, habitually to question their classes in spelling with closed books *during and after* each reading lesson, the children would insensibly acquire the habit of noting the look of every word, and thus become good spellers.

"In all but the best infant schools the drudgery of teaching to read by wearisome and unintelligent reiteration still goes on. I have reason to believe that some of the training colleges do not sufficiently warn students against the waste of time and toil involved in letting children chant in unison "*the, the, the ; dog, dog, dog ; bit, bit, bit ; my, my, my ; leg, leg, leg.*" At any rate this sort of practice still holds, and will continue to hold its ground until teachers have realised that unintelligent teaching will surely entail loss of merit grant. Untrained teachers of course often know no better, but even trained teachers sometimes allow their helpers to lapse into lax ways, and require to be reminded of such obvious truths as that infants may and should learn to *phrase* from a very early age, and that instead of reading with monotonous jerks *staccato*

"to," "the," "dog," they may readily be trained to phrase naturally "to the dog" just as they talk.

"Reading primers are now to be had in which words of irregular notation are kept out of sight in the earlier stages, and it is at length beginning to be generally known that many words of one syllable are harder for a child to read than long words of regular notation. It is better that infants should be supplied each with his own primer, and use six-inch pencils as pointers, than that they should read off sheets. I may note in passing that, while I do not attach to correct spelling the overweening value commonly set upon that accomplishment, I sympathize with the efforts that are being made to correct some of the chief unhistoric anomalies in the modern spelling of our language by reverting to older, simpler, and more correct forms."

Hints for
teaching
reading.

Let the following "rough and ready" rules be observed in teaching this important subject to beginners.

- (a) Teach *each word* separately. If the children use Reading sheets, they should *say* the words pointed to. If books are used, let the words be said, in a natural tone of voice, *backwards*.
- (b) When each separate word can be recognised by the children, the teacher should group the words properly in twos or threes, and *read* each group with proper, or slightly exaggerated, emphasis.
- (c) The children should then imitate the teacher, first collectively, then individually, mistakes being pointed out by the teacher.
- (d) Short conversations on the passage read should be introduced. Thus, if the sentence be—My dog Dash runs after Tom's red ball—such questions as the following should be asked: (1) What have we been reading about? (2) What is the name of the dog? (3) Whose dog is it? (4) What does the dog do? (5) Whose ball is it?

(6) What is the colour of the ball? The answers to questions should always be required in the form of a sentence, and teachers should insist on this. Thus, the answer to question No. 5 should not be "Tom's," but "It is Tom's ball," and to No. 6, "It is red."

In answering questions like these, the children will naturally lay the proper stress on the words, and the painfully monotonous reading frequently heard in schools would be stamped out by adopting some such methods as here advised. Monotonous reading is a strictly artificial product, manufactured expressly by teachers, for no child would, of its own accord, drawl out in a sing-song fashion—The | dog | barks | at | night, but if asked to *tell* it to you, would group the words, and say—The_dog_barks | at_night.

It must be remembered that the repetition of words without regard to sense or meaning is not *reading*, and that the following points should receive due attention :—

(a) *Accuracy of pronunciation of words.* This depends upon—

- (1) Proper *sounding of vowels*, which would put an end to most provincialisms.
- (2) *Articulation of consonants.* Under this head we may refer to the *use*, or rather the *abuse*, of the aspirate. Sufficient attention is not paid to the use of this letter. It is generally omitted when it should be used, and sounded when it should not be, and one is as great a mistake as the other. Some children use the aspirate with such exaggerated emphasis as to be painfully ludicrous to every hearer except the teacher, who listens with pride and self-complacency to the fancied success of his labours. Final consonants are often much neglected, although proper attention to such as t, g, d, k, s, and c stamps the teaching as careful. The result of inattention

to consonants is the *slurring of words*, as when "nearer home" is pronounced "nearer-ome," &c.

- (3) Omission or introduction of a letter or syllable. Thus "particularly" is often pronounced "particlarly," and "umbrella" called "umberella," whilst the Cockney has his "drawring" lesson, and "drowned" often becomes "drownded."

Young teachers should be very careful to avoid the use of provincialisms, and remember that it is their duty to *elevate* the pupils, not to lower themselves to the level of their children. One sometimes sees a list of the words commonly mispronounced in the locality of a school hanging upon its walls, and kept constantly before the eyes of the children.

- (b) The *Tone and Manner* should be unaffected and natural. The tone should not be too loud, or high pitched. On the other hand, the children should not read in a low, soft tone, which cannot be heard distinctly by all the members of the class, for this causes *inattention* and *restlessness*, and is a great waste of time. As a rule, teachers do not sufficiently "pattern" the reading, and call on a class or an individual to imitate the pattern.
- (c) *Emphasis*. Teachers should show, by illustrations, that certain words in a sentence require more prominence than to them than others. Proper emphasis is the result of intelligent reading.
- (d) *Rate*. The reading should be slow and deliberate. When children can read fluently they are much tempted to read too fast, and this results in *inaccuracy* and *want of expression*.
- (e) The *Pause* is one of the chief aids to *expression*. "Read as you would talk" is an oft repeated bit of advice. Young

children are told to "mind their stops," but older ones should pause according to the *sense* of the passage.

f) *Inflection and Modulation of the voice.* Children who read *intelligently*, as a rule modulate the voice to a greater or less extent; but in some schools they are actually taught to inflect the voice by mechanical rules, *e.g.*, to raise the voice at a comma, to drop it at a full stop, &c., and so on. This is too absurd a practice to need further comment, and only the most mechanical teachers would adopt it. Sing-song monotony is often prevented by "showing the children what the sense of the passage is," and asking them to "tell" you all about it.

Teachers sometimes say they cannot find time to attend to all these points in the reading lesson, and that it is impossible to teach little children to read with due expression, &c.; but what can be done in schools conducted under the most unfavourable circumstances, can be done in all. Reading is too often *heard*, not *taught*, as is frequently shown in the lessons given before the Inspector on the examination day. It is often said that anyone can take the reading lesson, a first year pupil teacher, a candidate, or even an upper standard scholar, and this most difficult subject is frequently entrusted to such. How can we expect one who cannot read himself to correct others, and to teach *expression*? "Reading, considered as a fine art," says Mr. Fitch, "is largely imitative, and the best instrument for giving exactness and expression to the utterance is *pattern reading*. When this is absent, the reading, however passable, is monotonous and soulless; but in the rare instances in which the teacher himself is a finished and graceful reader, and can now and then delight his class by showing them how a poem or dramatic passage ought to be read, the whole tone and quality of the performance are raised."

"Pattern"
reading.

Reading of
poetry.

The reading of *Poetry* is almost invariably a monotonous sing-song, without regard to pause, &c. ; and one listens ~~in vain~~ for any attempt to introduce into the tones of voice the modulation and pathos indicative of true appreciation of the sense even of passages from the stirring strains of Scott, or the touching stanzas of Mrs. Hemans. In few schools, indeed, are the children taught to appreciate, or even understand, a poem. How often does a teacher show what constitutes poetry ? How often is a poem analysed by the class,—its sentiments, metaphors, figures of speech, and beauty pointed out ? The oft-quoted phrase, "Hardly ever," is a suitable answer, although poetry "is the natural language of excited feeling, and a work of imagination wrought into form by art."

Simul-
taneous
reading.

Much improvement might be effected in reading by a judicious use of simultaneous reading. Many Inspectors speak in strong terms against this method, but it is the *abuse*, rather than the *use*, which they condemn. Simultaneous reading, in the hands of a skilful teacher, is a potent method of teaching expression and intonation, and a greater amount of practice in reading is given to each child. In a large class it is impossible, in the time set apart for a reading lesson, for every child to read, especially when part of it is devoted to explanation of subject matter, and attention is paid to just expression.

The following points, frequently overlooked by teachers, strike an Inspector very forcibly :—

- (a) *Posture* of the child when reading. The children should be taught to stand comfortably upright, not in a lounging attitude, or standing on one foot, or other disorderly way. It is a common occurrence for boys to hold their ~~books~~ in one hand, whilst the other is carefully concealed in the pocket.

(b) *The holding of the book.* Sometimes children stand up, and ~~try~~ to read from their books lying on the desk, or held too low down, and this prevents them from reading in a natural and distinct tone. Often one sees a child reading with his face turned away from teacher or class, or both.

(c) *Attention to details.* A child frequently fails in reading through inattention to the little words, and this often occurs in the upper standards. It is caused, of course, through careless teaching, and is often observable in schools where insufficiency of staff necessitates the deplorable custom of allowing children to teach children. When a child reads "on" for "no," "of" for "for," "to" for "at," it is evidently not following the sense of the passage read, and this constitutes *unintelligent* reading.

The pronunciation of the words "a" and "the" is not sufficiently attended to. It is painful to hear children drawl out—*Thē | dog | bit | thē | rat*, instead of *Thē_dog | bit | thē_rat*. Teachers, then, should show the children that each of these words has two different sounds, one used before a word beginning with a vowel, and the other before a word beginning with a consonant.

The selection of reading books is a very important element of ^{Selection of} success in teaching children to read, and this has often been ^{Reading} commented on by Inspectors in their reports. Not unfrequently a teacher says to the Inspector that the number of failures were due to the fact that he had examined the reading out of very hard books. The Inspector cannot help this; he did not select the reading books; the teacher is responsible for the difficulty of the books. ^{Books.} Surely, with so many excellent books at hand, there should be no difficulty in selecting those suitable for every class of school. Inspectors universally condemn the use of too difficult books, and

assert that the reading of the upper standards is the most unsatisfactory, because of the unsuitability of their books, which are often too difficult in language and uninteresting in matter. The language should be child-like, not childish, and the subject-matter such as will not only interest the child when reading, but will create a taste for reading. "I am not without hope," says Mr. Blakiston on this point, "that reading books above the 2nd Standard may be occasionally replaced by cheap reprints of standard works of continuous interest, and by good selections of simple poetry. Of the three reading books required, one must deal with English history, the second will most frequently deal with geography, the third may advantageously be a volume of 'poetry for the young,' or some well-written tale. In selecting reading books for class subjects, it is well to choose suggestive rather than exhaustive works; to prefer good literary form and attractive style, to books which present dry facts in pigeon-holes, duly labelled and numbered, so as to cram the memory without the aid of association and comparison. Children should be trained to pigeon-hole their facts for themselves, to draw up their own lists from their readings and lessons, just as is done by students of the higher branches of learning. I mention this because, when left to themselves, teachers too often select books which are not really reading books, but merely enlarged text-books."

It should also be borne in mind that the *quantity* of reading matter in a book must be considered. The Education Department now prescribes a *minimum* amount of reading matter for each standard, which is as follows:—

Standards I. and II.—2 books, each containing at least 80 pages of *reading-matter*.

Standard III.—3 books, each containing at least 120 pages of reading matter. One of these three must be a History Reader.

Standards IV.-VII.—3 books, one of which must be a History Reader, the quantity of matter increasing in proportion to the standards above the third.

There are several books published (especially for Standard I.) which contain 80 or 90 pages, but a half or more of these is taken up by illustrations, diagrams, words for spelling, tables, and transcription exercises, and these pages are not accepted as containing reading matter. Reading would be much improved if the books used contained connected narrative, instead of extracts. There is too great a tendency now-a-days for children to "get up" the reading books used, instead of being taught to read any book suitable to their standard. Surely there is something wrong in the teaching when a boy or girl in Standard V., VI., or VII., cannot read *any* book of ordinary difficulty which may be taken up.

The development of intelligence as tested by questions on the meaning of words and phrases, is a point carefully weighed by ^{Development of Intelligence.} Inspectors in assessing the "Merit Grant," and to which far too little attention is paid, except in the best schools. That this questioning does not form a part of the ordinary reading lesson is often shown by the blank amazement which the children exhibit, when the Inspector asks for the meaning of the most easy phrase or word. Thus the questions—What is a cottage girl? What is meant by "making a purchase?" What is a steed? elicited not a single answer from a large class of children in Standard III. It must not be supposed that the mere learning of meanings of the words, &c., given at the beginning or conclusion of a chapter, will satisfy an Examiner. The children can hardly be expected to give the exact synonym for an uncommon word, but should be taught to explain words in their own language, by the use of a phrase or a sentence. Nothing pleases most Inspectors more than

this kind of answering, which is *natural*, not *artificial*, *intelligent*, not *mechanical*.

Some teachers require the children in the upper standards to write out from memory, and in their own language, the substance of the passage read, and this forms a good exercise in composition.

I. SUMMARY OF POINTS TO BE OBSERVED IN TEACHING READING:—

- (1) Arrangement of the children of a class. The class should be as compact as possible, and suitably arranged. This is often overlooked, and one sometimes sees 6 in one row, 11 in the next, 3 in the next, and so on.
- (2) Attention of the children to the subject.
- (3) Posture of the children when reading.
- (4) Manner of holding the book.
- (5) Utility of "pattern reading," and the judicious use of simultaneous reading.
- (6) Tone—natural, unaffected, not too loud or high pitched, nor too soft, so as not to be heard by the teacher and all the children.
- (7) Proper pronunciation of words. Checking of provincial vowel sounds. Articulation of consonants—"h" and final consonants. Attention to little words.
- (8) Suitable expression and grouping of words.
- (9) Proper use of pauses.
- (10) Development of intelligence by systematic and abundant questions on the meaning of words and phrases, subject matter, &c.
- (11) Answering of questions in complete sentences.

V.

The pass for writing depends upon three points, viz. :—hand-writing and spelling, together with composition, in Standards V. to VII. The importance attached to handwriting is evident from the “Instructions to Inspectors,” which state that in no case shall a pass be given for writing which does not reach the mark *fair*, notwithstanding excellence in spelling or composition. It is often thought that this subject needs very little attention, and depends entirely upon practice, thus the children *learn* to write instead of being *taught* to write. No subject tells more tales concerning the methods of teaching adopted than handwriting. Even when papers are neat and clean one often finds in the same school or class a varied style, wrong formation of letters, imperfect joining of letters, irregularity in size and slope—all the result of the absence of systematic teaching.

The best writing is that which is clear and bold, and this depends chiefly on

Characteristics of good writing.

- (a) Correct formation and joining of letters.
- (b) Simplicity of form.
- (c) Regularity in size.
- (d) Uniformity in slope.
- (e) Attention to the spacing of letters and words.

Writing should be taught from the black-board, upon which the Teacher should set copies, and require the children to imitate these. When a copy has been made, the errors of formation, slope, &c., must be criticised and exhibited on the black-board, and the

Writing should be taught from the blackboard

children should then try to remedy former mistakes. Black-board teaching of writing is not sufficiently adopted in schools, and, as a consequence, it is the exception, rather than the rule, to find evidence of systematic teaching of writing.

Writing is a mechanical art, and requires a great deal of practice, but children cannot be expected to write well unless proper materials are provided. The *slates* used should be *uniform* in size, and it will be found that those 11×8 are suitable for Standards I. and II. Not only should the slates be uniform in size, but they should also be uniformly ruled with double lines in the lower standards—not less than $\frac{3}{8}$ of an inch apart in Standard I., and about $\frac{1}{2}$ of an inch for Standard II. If these points were attended to, and the children taught to observe the lines carefully, there would not be such an abundance of *small, cramped, and irregular* writing in schools.

Slate
pencils.

The *pencils* should be of good length, and tin holders should be at hand to use up the short pieces of pencils. One often sees half the children in a class trying to write with pieces of pencil about an inch long, and the other half provided with new sticks unsharpened. That it is impossible to write properly with such is not doubted by anyone, even by the teachers who thoughtlessly allow it.

Pencil and
pen drill.

Not only should the children be supplied with suitable pencils, but they should be taught how to hold them. The following 'pencil and pen drill' has been found of great use in the schools in which it has been adopted :—

- Motion (1)—Children let right elbow rest lightly against the side.
- „ (2) „ show right hands, with clenched fist.
- „ (3) „ lift up the forefinger.
- „ (4) „ put out thumb and middle finger.
- „ (5) „ place the pencil between the thumb and middle finger, by using the left hand.
- „ (6) „ put the first finger down on the pencil.

Sufficient attention is not paid to the posture of children when writing, and it is no uncommon occurrence to see some children turned to the right, others to the left, and some looking straight before them. Much damage is sometimes done by the abnormal twisting of the spine caused by the wrong posture during the writing lesson. Children should also be taught to place their slates, books, or paper in a proper position on the desks. Besides looking disorderly, the children cannot write well unless a proper posture of the body be adopted, and the material written upon be in a proper position.

Posture of children when writing.

It is quite a mistake, *financially* as well as *educationally*, to supply poor materials for the use of children, yet one often finds in schools short pencils, broken slates, poor paper, and bad pens. The Code states that copy books must be shown in each standard, and the selection of these should be very carefully made. That sufficient attention is not paid to this is evident from the fact that copy books suitable for Standards IV.-VI. are frequently found in Standards I. and II. and *vice versa*; and that in some schools, especially those where the children provide their own books, there is a great variety in use. In one large class as many as 20 different kinds have been noticed. In such schools the writing is necessarily varied and irregular. Many teachers prefer ruled exercise books, all the copies being set by the teacher on the black-board. The great advantage of this custom is that the teacher teaches his own style of writing, and can utilize for his copies facts in history, geography, &c. Where this method is adopted the writing is generally uniform, and displays evidence of genuine *teaching* of writing.

Materials for writing.

When copy books are examined, it is frequently found that there has not been sufficient supervision during the writing lesson, the mistakes in formation and junction of letters, the spacing of words,

Examination of copy book.

inattention to the lines, and errors even in spelling, remaining unnoticed and uncorrected by the teacher. Writing lessons so conducted are worse than useless, for the children are indirectly encouraged to write badly.

Much harm is sometimes done to the character of the handwriting by requiring children to write too soon on single-lined paper. It would be well to use double-lined paper in Standard III., and this may be done on the examination day, if the Inspector does not object to it. It should not be, however, used for examination purposes above Standard III.

SUMMARY OF POINTS TO BE OBSERVED IN TEACHING WRITING.

- I. *Materials.*—(a) Pencils of good length, or short pieces in tin holders, and sharpened.
 - (b) Slates (1) uniform size.
 - (2) ruled uniformly (double lines on one side).
 - (c) Paper—good quality—suitable copies.
 - (d) Pens—good and suitable to style of writing, with sufficiently long pen-holders.
- II. *Method.*—(a) Position of the body and of the material written on.
 - (b) Proper holding of pencil or pen (Pen Drill).
 - (c) Supervision, and criticism on black-board if a general fault is noticed ; individual mistakes pointed out to the makers of them.
- III. *Qualities of good writing to be cultivated.*—
 - (a) Correct formation and joining of letters.
 - (b) Simplicity of form.
 - (c) Regularity in size.
 - (d) Uniformity of slope.
 - (e) Proper spacing of letters and words.

VI.

Spelling is undoubtedly very difficult to teach, but mistakes made in dictation are often due to carelessness on the part of the children, or to the neglect of teaching the broad rules of spelling on the part of the teacher. A very fertile source of bad spelling is the manner in which dictation lessons are frequently given. In schools with an insufficient staff, one often finds the dictation lesson being conducted by an elder scholar, who is quite incompetent to do so; and, not unfrequently, pupil teachers and even assistants examine the dictation so carelessly, that a number of mistakes remain unmarked. Occasionally, when mistakes are marked, teachers do not trouble themselves to adopt means for preventing the recurrence of them. Dictation depends very much upon the reading. Where the reading is intelligent, the dictation is generally very good; where there is more or less lack of intelligence, mistakes will certainly occur. Although there is such a close connection between reading and spelling, we cannot rely on the reading lesson for affording sufficient instruction in spelling, therefore spelling must be taught.

Spelling depends more upon the *eye* than the *ear*, consequently children should previously *see* the words, and having *looked* at them, they should be expected to spell them correctly. The value of *transcription* in teaching spelling depends upon this principle, and is of great advantage in *fixing* the forms of the words in the mind, especially those which are short but difficult. Transcription is the best introduction to dictation, and should be largely used throughout the school; but the exercise becomes almost valueless if the writing

be not carefully examined, and errors in spelling pointed out. The practice of allowing advanced children to look over the chapter to be read for 4 or 5 minutes before the reading lesson actually begins, has been found very beneficial, for the children can notice the difficult words, which they should write down.

Dictation should not be given unless the children are supposed to know how to spell the words, otherwise they will guess or try to copy—both grave faults. It is a test of spelling rather than a means of teaching it.

Division of
words into
syllables.

An important point, very frequently unnoticed by teachers, is the division of words into syllables. In examining the dictation and composition exercises, one often notes that when there is not sufficient space to complete a word on one line, it is finished on the next, without any regard paid to *syllabification*, the words being divided thus :—wonder ; positio-n ; come-s ; and so on. Another practice, equally common, is that of completing the word by placing the letters just over the word, thus :—length, | &c. Both these customs should be carefully eradicated.

General
rules for
Dictation
lessons.

The following general rules for the dictation lesson might with advantage be adopted :—

- (1) The passage to be dictated should be first carefully read over *once*.
- (2) The words should be given out *once* in suitable *phrases*.
- (3) The children should not write any part of the phrase until the whole phrase be dictated.
- (4) When the children have written down the phrase carefully, they should look straight at the person giving out the dictation. (This prevents an occasional glance at another paper, and shows the teacher when the next phrase is to be dictated).

- (5) Keep the children well at work, and do not pause too long between the phrases, so as to break the continuity of the passage.

- (6) Inculcate *carefulness* by disallowing alterations, which Inspectors generally reckon as mistakes.

In many schools the phrases are repeated by the teacher two or three times, so that when the examination comes, and the phrases are given out only once by the Inspector, disastrous results ensue.

It need hardly be stated that, in schools where the children are trained to habits of attention, there is no necessity for dictating a phrase more than once; but when children do not listen carefully, but begin to write immediately the first word of the phrase is given out, they are not likely to grasp and retain the complete phrase. In writing from dictation the children should be taught to write *sense*, and if, as sometimes occurs, a certain word is not properly distinguished by a child, he should be sure that in writing down the word supposed to be heard, it should convey complete sense. It is a common rule of Inspectors, that if a child writes down a wrong word, but which might have, through some acoustical defect, sounded similar to the word dictated, this word, if spelt correctly, is not counted as an error if the word used makes *sense*.

VII.

COMPOSITION.

This interesting and extremely useful exercise is often treated in such a manner as to be disliked both by the teacher and scholars, and consequently productive of bad results. Composition is the aim of all our teaching of writing, spelling, grammar, and, to a great extent, reading; yet how frequently do boys—who can read, write, and spell—leave school quite incapable of writing a letter to their friends or employers.

The first exercise in composition prescribed by the ~~State~~ in Standard V., but this is to a great extent an exercise on *memory*, for the children have to reproduce a short story read *twice* over by the Inspector or teacher. It should be observed that the pass in Standard V. for writing depends on:—

- (1) Handwriting which must not fall below the mark *fair*.
- (2) Correct spelling.
- (3) Grasp of the story read. The Instructions to Inspectors say that “neither accuracy in spelling nor excellence in writing should secure a pass, unless the exercise is an intelligent reproduction of the story.”

A short theme or essay is required of children in Standards VI. and VII., and in Standard VI. “no child ought to pass who ~~does~~ not show the power to put together in grammatical language, correctly expressed, and, if required, in the form of a letter, a few simple observations on some easy subject of common and familiar experience. In Standard VII., in order to secure a pass, the theme should exhibit something more of structural character and arrangement, the sense should be clear, the expressions fairly well chosen, and the writing, spelling, and grammar free from ordinary faults.”

Composition must be *taught*, and in doing so the following points must be carefully explained :—

- (1) Application of the grammatical knowledge of the children.
- (2) Correct punctuation.
- (3) Use of inverted commas in quotations, statements, &c.
- (4) Use of capital letters.
- (5) Division into paragraphs.
- (6) Use of proper words and expressions.

Composition is the *practical* application of the *theory* of grammar, and the teaching of the latter is useless unless the object of that teaching and its reference to composition, be constantly presented to the minds of the pupils. If the children were taught to apply their knowledge of "analysis of sentences," one would not so often see in the exercises written on the examination day numbers of *phrases* strung together anyhow, without displaying any knowledge of the nature of a sentence and its essential parts. The letters in Standard VI. should be useful, such as will be a training for the practical affairs of life. The children should be taught to write their letters or themes on a plan carefully thought over, to treat the subject under heads, and to divide the essay into paragraphs.

Instead of this, one often finds the composition entirely wanting in structure, ideas put down just as they come into the mind, wrong words and expressions used, punctuation and division into paragraphs completely ignored, and even the spelling of easy words often incorrect. It will be found a good plan to require the children in Standard VII to write a short essay on some of the well-known proverbs, *e.g.*, "A stitch in time saves nine," "Honesty is the best policy," "What is worth doing at all is worth doing well," "Empty vessels make most noise," "All is not gold that glitters," "Better wear out than rust out," &c.; but in writing on these subjects

children should not be led to think that the mere writing out of a story in illustration forms an essay. This is frequently done.

Dictation may be given to Standards V.-VII. as an alternative exercise with composition, and the passages given need not be selected from the reading-books used in the school.

*SUMMARY OF POINTS TO BE OBSERVED IN
COMPOSITION :—*

- (1) Structural plan—division into heads.
- (2) Use of simple and grammatical language.
 - (a) Words well within the child's understanding.
 - (b) Essential parts of a sentence.
 - (c) Proper use of relative pronouns.
 - (d) Proper use of *tense, person, and number*.
 - (e) Correct use of adjectives and adverbs.
 - (f) Proper use of conjunctions.
- (3) Use of short sentences.
- (4) Correct punctuation.
- (5) Proper use of capital letters and inverted commas.
- (6) Division into paragraphs.
- (7) Proper heading and conclusion of a letter.

VIII.

Arithmetic is a subject the practical value of which in ordinary life is obvious to all. Calculations have to be made, at one time or another, by every person in all stations of life, and to enable them to do this is one of the chief objects in teaching arithmetic. Apart from this, however, arithmetic, when well taught, has a special value in training the mind to habits of exactness and correctness of thought, and of methodical arrangement of ideas. But alas! children are too often taught simply to work sums in such a mechanical way that the educative value of arithmetic is almost nil. If children are to enjoy the full value of arithmetic they must have constant practice in working out *mentally* simple problems on the affairs of everyday life, and where this is done daily, the practical arithmetic invariably turns out well, being both accurately and intelligently done, for the children are thus trained to grapple with problems involving two or more simple operations. There is no disguising the fact that mental arithmetic is the most neglected of the elementary school subjects, and the result is shown in the utter inability of children to grasp the problems given on the examination day. The pass for arithmetic can of course be secured by accuracy in mechanical work, but the attempts at problems are largely instrumental in raising the Merit Grant for intelligence. Inspectors seem determined to stamp out of our schools such mechanical aids as counting on fingers, use of strokes, bobbing of heads, &c., and this fact cannot be too carefully attended to, if teachers wish their work to be looked upon as intelligent and satisfactory. One is often surprised at the number of papers examined in which the figures are badly formed and spaced, and the sums badly arranged, sometimes crowded into one corner, or close to one side of the paper. It seems to be quite an exception to meet with papers where these

ARITHMETIC.

Character
of Arith-
metic
papers.

points are attended to, although they are very important, for the "Instructions to Inspectors" say that "right method and arrangement, and good figures, may excuse slight error in some of the answers." Besides, if children are taught to work neatly, they are more likely to be careful and accurate in their working.

Mental
Arithmetic

"Rapid and correct calculation," says Mr. Burrows, H.M.I., "can only be obtained by practice. As the best means to secure this, mental arithmetic, which of late has been much neglected, should be far more extensively used. There is no better exercise for all standards, with a view to accuracy, than the casting up of long additions at sight. The bad habits of counting on fingers, and by strokes, or slates, as a substitute for calculation, are far too prevalent, and should be strictly prohibited. Many teachers, especially in girls' and infants' schools, spend much valuable time in teaching children to arrive at results by some mechanical means, rather than by honest and wholesome calculations. This is especially the case in teaching subtraction and division. To such faulty instruction as this may be partly attributed the inferiority of girls to boys in arithmetic. These habits, moreover, are not eradicated without infinite trouble, and are a fruitful source of inaccuracy and failure during the whole of a child's school life." It is well known that the results in arithmetic are generally lower than those of reading or writing, and the chief causes of this are :—

- (1) The children are neither ready nor sure of their tables. —
- (2) Sufficient practice is not given in simple mental calculations.
- (3) Incorrect notation.

Importance
of thorough
knowledge
of the
tables.

It is not sufficient that the children should be able simply to say the tables from beginning to end, but they should be cross-questioned on them ; thus, if a child in Standard I. knows that 4 times 8 = 32, he should also know—

- (1) That 8 times 4 = 32.
- (2) That there are 4 eights or 8 fours in 32.
- (3) That if there are 32 boys in a class, and 4 desks for them, that 8 would sit in each desk, if there are to be the same number in each.
- (4) That if the children pay 4d. each for school money, and that the teacher has collected 32 pence or pennies, then 8 children have paid their school money.

Again, when the children learn that 6 times 6 = 36, they should be questioned, by using concrete quantities, as to what other numbers, when multiplied together, make 36 (4 times 9 and 3 times 12), and so on.

If the tables were taught in this manner there would be no necessity for children to repeat the 6 times table from the beginning to find out that 6 times 8 = 48. This is often done by the children in Standard II., and frequently by those in Standard III., and one is often sorry to see children exerting themselves in this way whilst doing multiplication and division sums.

A device sometimes adopted, especially in teaching division, is the writing down of the tables to be used on the side of the slate, and then the sums are worked from this "ready reckoner." When such aids as these are necessary, very little can be said in favour of the character of the work, or of the intelligence of the teaching. The great value of correct knowledge of the tables, from the teacher's point of view, is also evident from the fact that, in doubtful cases, Inspectors make the pass dependent on readiness and correctness in answering questions on the tables.

Why is it that these mechanical dodges are so widely taught? It is because in the great number of cases the lessons on *number* are given on a radically wrong method, and children are taught in the infant schools to count by *units* instead of by *groups*. The

remarks on this subject by Mr. Blakiston, in the Blue Book of 1882-3, are so important that they are here quoted, and every sentence deserves careful attention. He says:—

Arithmetic.

"I have long been dissatisfied with the arithmetic of the lower classes in our schools. They pass the required test by being drilled to set down and work with mechanical accuracy, but with no true understanding of their use or meaning, sums involving thousands. Let the children of a good 1st Standard be asked to suppose that 27 shillings are to be given away in two prizes represented by these two figures written on the blackboard. If the pointer be placed on each of these two figures successively, it will be found that every child, failing to recognise the value given to the 2 by its position, prefers 7 shillings to 20. With a view to bridging over this gulf between school work and daily life, I induced teachers last year to adopt the following scheme:—

Groundwork.

"Infants below the 1st Standard are taught to handle and count the coins which make up a shilling, and to work little sums with pence, threepenny, fourpenny, and sixpenny pieces, to keep shop, count change, and so on. Some teachers use halfpence also, as being well-known to children. For variety they are taught to measure by inches up to a foot, as also to count the months of a year and other things up to 12.

"In no subject more than in arithmetic does right or wrong teaching of infants affect a child's whole school life. It is quite a common thing to see children, even in the higher standards, reckoning off their fingers, or by strokes, or by bobbing their heads. The reason is not far to seek. Instead of having been trained as infants to deal with numbers in groups, and thus made perfectly at home with their properties and relations, they have been allowed to count by *units*, and have been forced to deal with abstract before being made familiar with concrete numbers.

"Children who have passed through a really good infant school, when they enter the 1st Standard, are thoroughly at home with numbers up to 12, and with such *aliquot parts* as halves, thirds, fourths, and sixths, from having seen their coins and inches grouped in twos, threes, fours, and sixes, and from having been

familiarized with the multiplication and division of these small numbers.

"In the 1st Standard children thus grounded readily master the arithmetic of two shillings, and work sums up to 96 farthings. The symbols $\frac{1}{2}$ for a halfpenny and $\frac{1}{4}$ for a farthing enable the teacher to lay a solid groundwork for early lessons in fractions. At this stage children are taught to measure, in yards, feet, and inches, the length and width of desks, doors, and walls, so that their lessons in counting help their first lessons in geography.

Second
Standard
Arithmetic.

"In the 2nd Standard it is found that the arithmetic of a sovereign and of a pound avoirdupois, coupled with that of a mile as required to complete practice in planning, makes children so interested in their work that they do their sums with far more pleasure than heretofore. Instead of increasing the teacher's toil, this seeming addition actually lightens it by enlisting in his support an eagerness to learn, which the working of abstract sums fails to arouse.

Introducing
New Matter.

"The adoption of such concrete teaching from the first tends to check a very usual fault of pupil-teachers in teaching arithmetic. Instead of badly beginning, as is now too often done, 'you have learnt short division, you are now going to learn long division,' a young teacher, where arithmetic is so taught as to show its practical uses rather than merely to secure a pass, would introduce new work with remarks calculated to arouse interest and attention. Thus in the case supposed he might ask how 12 score nuts could most fairly be distributed among a class of 23 children. Finding no easy way of doing this by such rules as they had already learnt, the children would be more likely to listen with attention to the short cut about to be shown them than would be the case were they simply told they were going to learn a new rule.

"All teachers profess familiarity with two golden rules, which, however, few habitually carry into practice: 'Lead from the known to the unknown,' and 'let a want be felt before you attempt to satisfy it.' It is the daily neglect of these golden rules that induces me to set down here such simple things."

The teaching of number will be more fully dealt with in the

accompanying book on "Infant Teaching," for it is in the infant school that the mischief is generally done.

Notation. Incorrect notation is another fruitful source of failure in Standards I.-IV., and must therefore receive its due amount of attention. The children should be taught to understand the effect that position has upon a number, by giving a number of examples illustrating this point. Numbers should be *dictated*. In so doing, a practice common with many teachers is to emphasize the word *and* in dictating such a number as 406, the children being taught to put a cypher where such emphasis is made. Such a practice as this often ends in failure at the examination, for the Inspector will not thus accommodate the children, and any attempt on the part of the teacher would also be promptly checked. It is sometimes thought that notation need only be attended to in Standard I., and perhaps II., but this is a great mistake, and would at once be acknowledged if the ridiculous mistakes in notation made even by pupil teachers in the Queen's Scholarship Examination were made known. Two points, which teachers should carefully attend to, are—

- (a) Sufficient practice in mental arithmetic.
- (b) Constant exercise in notation.

Mental Arithmetic As mental arithmetic forms so important a factor of success in practical arithmetic, a few remarks will be made on the subject, and some questions suggested for each standard. It might be well first to carefully notice what the Code and Instructions to Inspectors say on mental arithmetic. In the Code we find that "short exercises in mental arithmetic are to be given in the examination of all standards. These should not involve large numbers, should, from the first, deal with concrete as well as abstract quantities, and should be preparatory to the work of the next higher standard." The last remark must not be overlooked, for the exercises in mental

arithmetic in each standard must be preparatory to the work of the *next higher* standard. The "Instructions" lay down very definitely what is to be done in each standard, and say that, as "the object of this exercise is to encourage dexterity, quickness, and accuracy in dealing with figures, and to anticipate, by means of rapid and varied oral practice with small numbers, the longer problems which have afterwards to be worked out in writing, it is obvious that this general object cannot be attained if the exercises are confined to a few rules for computing 'dozens' and 'scores,' such as are often supposed to be specially suited for mental calculation. Practice should be given in all the ordinary processes of arithmetic—*e.g.*, in Standard I., addition, subtraction, and multiplication, with numbers up to 50, and money up to 2s. ; in Standard II., all the four rules, with numbers up to 144, and with money up to 10s. ; in Standard III., easy reductions ; and in Standard IV., simple exercises in fractions founded on the multiplication table, and on the aliquot parts of £1, of a yard, and of a pound avoirdupois. It is often found a help in calculation if the dimensions of the schoolroom, the playground, and the desks, and the weight of a few familiar objects, are accurately known and recorded, and occasionally referred to as standards of measurement. Knowledge of the reasons of processes, and mental arithmetic, are to be considered in estimating the intelligence of the teaching for the Merit Grant, but not in passing the individual scholar."

Mental arithmetic should be taken at the commencement of every arithmetic lesson, and it has been found a good plan to let the children write their answers on slips of paper, or on their slates. This will put each child on his mettle, and the teacher will not be led into the trap of supposing that a class is well prepared in the subject, when the questions are really answered by a few sharp individuals, upon whom the remainder of the class are dependent.

The following are the points which seem to be the least attended to in most schools :—

- (a) The composition of numbers, i.e., application of the tables, in Standards I. and II. (see questions 3 and 4 in Standard I.)
- (b) Reductions of *common* weights and measures, in Standard III., in addition to exercises on money.
- (c) The use of aliquot parts in Standard IV. (see questions 3, 6, and 12 of Standard IV., and No. 12 of Standard V.)
- (d) The proper understanding of fractions. When a class has been asked how to divide an apple into fifths, the following answers have actually been given in Standard V. :—Cut it into quarters ; cut it into halves ; divide it into 5 parts ; and when the Inspector has said that if it be divided into 5 parts—3 large and 2 small—which would be the fifth, a large part or a small one, there is a division of opinion. Again, one frequently finds that children, when asked how many halves there are in a *small* plum-pudding, say two ; and if this be immediately followed by—How many halves in a *large* one ? the answer given is often *three*.
- (e) Calculation of interest by short methods, i.e., by fractions (see questions 3 and 4 of Standard V., also 3 and 9 of Standards VI. and VII.)

EXERCISES FOR THE SEVERAL STANDARDS.

The following are suggested as suitable exercises for the several standards :—

Standard I.

- (1) Walking through some fields I saw 9 cows in one, 8 in another, and 7 in another. How many cows did I see?
- (2) A man came and took 12 of these cows away. How many were left?
- (3) I have 36 marbles, and I want to put them up into some little bags, the same number in each bag. How many shall I put into each bag? (Some will say 6, some 4, some 12, perhaps, and each answer separately should be utilized in the following question.)
- (4) One boy says, I shall put 6 into each bag; into how many bags shall I put them then?
- (5) How many penny dolls can I buy, if I have a shilling and a sixpence?
- (6) I buy 16 dolls, and each one costs me a penny; how much money shall I spend?
- (7) If I put down a two-shilling piece to pay for these dolls (question 6), what change shall I have given to me?
- (8) How many halfpenny oranges can I buy with this change? (Question 7.)
- (9) Which would you rather have—3 threepenny-bits or 2 sixpences?
- (10) Why? How much more?
- (11) You go to a shop to buy 2 lbs. of sugar at $3\frac{1}{2}$ d. a lb., and a pennyworth of nuts. You put down a shilling. What change will you take back to your mother?
- (12) Tell me what coins you could have as change.

Standard II.

- (1) I counted 17 sheep in one field, 9 in another, and 10 in another; how many sheep were there altogether?
- (2) Suppose I had 35 oranges, to how many children could I give 4 a-piece?
- (3) And how many would be left for myself?
- (4) I put into the savings bank a half-crown and a two-shilling piece; how much more must I put in before I have 10s. there?
- (5) I have 5 shillings and a threepenny-bit, how many boys could I give a penny a-piece to?
- (6) How many parcels, containing 3 apples each, can I make out of a bag containing 6 dozen apples?

PRACTICAL HINTS ON

- (7) If I can buy 2 oranges for three-halfpence, how many could I get for sixpence!
- (8) There are 72 boys in a class. If I want 8 to sit in each desk, how many desks must I have?
- (9) If the children in a school pay 3d. a week school money, and the teacher has 5s., how many children have paid?
- (10) If the children pay 3d. a week school money, and 11 of them have paid, how much money has the teacher got?
- (11) I go into a school at 18 minutes to 10, and leave it at 12 minutes past 10; how long have I been into the school?
- (12) I have 2 half-crowns; how many penny balls can I buy with them?

Standard III.

- (1) If I buy 6 lbs. of cheese at 8 $\frac{1}{2}$ d. a lb., how much change shall I have out of half-a-sovereign?
- (2) To how many boys could I give a threepenny-bit, if I had the change all in threepenny-bits?
- (3) Which would you rather have, 7 threepenny-bits or 6 fourpenny-bits?
- (4) Why? How much more is it?
- (5) How many 2-ounce packets can I make out of a lb. of tea?
- (6) If I spend a penny a day for milk, how much will it cost me in the month of December?
- (7) If this desk be 1 yd. 2 ft. long, how many inches does it measure?
- (8) My watch loses 5 seconds a day; how much will it lose in a fortnight?
- (9) How many more days will it take before it has lost 2 minutes?
- (10) You come to school at 5 minutes to 9, and leave at 5 minutes past 12; how many minutes do you spend at school?
- (11) I place 2 half-crowns, a shilling, and 2 fourpenny-bits in the bank. How much more must I put in to make half-a-sovereign?
- (12) How many books at 4d. a-piece could I buy with 3s. 4d.?

Standard IV.

- (1) I give a quarter of an orange a-piece to 41 girls; how many must I cut up?

- (2) How much will be left for myself?
- (3) How many books, which cost half-a-crown each, can I buy with £2 10s.?
- (4) This slate is 1 foot long and 10 inches broad. Suppose a penny postage stamp covers a square inch; how much will it cost to cover it with these stamps?
- (5) How much will it cost to paint a wall 12 feet long and 8 feet high, at 3d. a square foot?
- (6) What will 19 yards of cloth come to at 3s. 4d. a yard?
- (7) I buy a quarter of a hundredweight of butter at 1s. 8d. a lb.; how much will it cost?
- (8) If I take 8 steps in walking 2 yards, how many steps shall I take in going a quarter of a mile?
- (9) I buy a bushel of corn; how many quarts could be measured out of it?
- (10) I walk round a square field, each side of which is 440 yards long; how far have I walked?
- (11) How much will a stone of soap come to, if a quarter of a lb. cost a halfpenny?
- (12) If I give 6s. 8d. a-piece to 37 old men, how much do I give away?

Standard V.

- (1) If 6 sheep cost £12 15s., what would 5 cost?
- (2) I go to a shop and buy a cwt., a quarter of a cwt., and 10 lbs. of rice, at three-halfpence a lb.; how much does it cost?
- (3) If I buy a knife for 8d., and sell it for 9d., what per cent. do I gain?
- (4) I buy a horse for £35, and sell it so as to gain 20 per cent.; what do I get for the horse?
- (5) What is the smallest number of boys that I can arrange in rows of 5, 6, or 10, so that I may use up all the boys each time?
- (6) What is the length of the longest piece of string I can use, which shall exactly measure 2 walls of 16 and 24 feet long respectively?
- (7) What is the difference between the square of 11 and the square of 12?
- (8) If I have a large orange, can I give a half to one boy, a quarter to another, and a third to another?

PRACTICAL HINTS ON

- (9) Why not? How much of another orange of the same size shall I require in order to do this?
- (10) How much will then be left?
- (11) Which would you rather have, a fifth of an orange or a sixth? Why would you? How much greater?
- (12) What will 3 score of books cost at 1s. 8d. each?

Standards VI
and VII

- (1) Four church bells start together ~~one~~ tolls every second, another every 2 seconds, the third every 3 seconds, and the fourth every five seconds. How many times will they toll together in a quarter of an hour?
- (2) In a class of 60 children, 5 per cent. fail in reading; how many children pass in reading?
- (3) I buy a book for 2s., and sell it for eighteenpence; what do I lose per cent.?
- (4) Which is the greater, $\frac{2}{3}$ or $\frac{7}{8}$?
- (5) On going a journey I walked $\frac{1}{2}$ of the way, rode in a train $\frac{1}{4}$ of the distance, and in a cab $\frac{1}{8}$ of the way; I then had 2 miles to go. What was the length of the journey?
- (6) I spent a half of my money on Monday, one-third of what remained on Tuesday, and then had half-a-sovereign left. How much had I at first?
- (7) If I spend $\frac{1}{8}$ of a sovereign, how much will be left?
- (8) A man spends $\frac{1}{3}$ of $\frac{1}{2}$ of a sovereign; how much will remain?
- (9) A gentleman buys a house for £800, he then sells it so as to gain 25%; what did he sell it for?
- (10) What is the least sum of money that I could distribute either in shares of 15s. or of 3s. 4d.?
- (11) Divide $3\frac{1}{2}$ into 2 parts, so that one may exceed the other by $\frac{1}{2}$.
- (12) What fraction of £1 is equal to $\frac{1}{4}$ of half-a-crown?

Subtraction a failing subject in Standard VI

It might be well to point out that *subtraction* is a failing subject in Standard I, and this important rule should be taught in an intelligent way by the method of decomposition of numbers; but the children should have plenty of previous mental exercise in subtracting easy numbers from one another; and, to test intelligence, the

teacher would find it useful to ask the children to take a larger number from a smaller, for in some schools they are able even to accomplish this. The children should also be accustomed to have the lower line of the subtraction given out first, as some few Inspectors adopt this practice occasionally. The wise limitation of numbers to those under 1000 should be strictly adhered to, and in some districts the Inspectors are careful in arranging the numbers of the addition sum, so that the answer shall not exceed 1000.

If the children in Standard I. are thoroughly acquainted with the multiplication tables, and the applications of them, notation also having received careful attention, the work of Standard II. should be found easy. Plenty of easy mental exercises, especially on tables, should be given daily, and this would entirely do away with the mechanical methods before spoken of.

Children in Standards I. and II. frequently *prove* their sums; but when this is done the proof should be rubbed out, or placed in such a position that it may not be mistaken for the answer of the sum.

A fault which young teachers especially must avoid is that of allowing the exercises given to run in a groove. Not unfrequently are teachers quite disappointed with the results of a standard, especially in Standards I. and II., and this has perhaps been brought about by a strange set of sums having been given by the Inspector. The children would probably have worked correctly much more difficult sums, if the teacher had given them out. It should not be forgotten that division by 11 and 12 might be given at the examination, and this has been remarked, because very frequently such a sum causes disappointment.

In Standards III. and upwards, there is too great a tendency to Test Cards, trust entirely to test cards. Where these supersede, as they sometimes do, class teaching and the use of the black board, they are mischievous; for the "working of a number of examples, as alike

as two peas, is no test of the child's ability to apply the 'rules' to the solution of the little problems which meet him in everyday life; and unless his school teaching does as much as this for him, it is of very little practical use."

"Long Division not well taught.

Experience has shown that "long division," is least satisfactorily taught in Standard III., and that in many schools these sums are scarcely ever worked right. This is traced often to incorrect knowledge of the *tables*, although sometimes *notation* is the cause.

Sufficient attention is not paid, as a rule, to the following:—

- (a) *Division by factors* (Simple and Compound Division).
- (b) *Judicious selection of factors* in Multiplication. If a child has to multiply £586 17s. 9½d. by 79, he almost invariably multiplies by 10 times 7 + 9 times the top line, or $12 \times 6 + 7$, instead of using 10 times 8, and subtracting the top line. This seems to be quite overlooked in most schools.
- (c) *Proper explanation of fractions*. Children in Standard V. often work their addition and subtraction of fractions correctly, but if asked to say how they would divide an apple into *fifths*, they usually display the greatest ignorance.
- (d) *Short methods in working practice sums*. If the children are requested to find the cost of 2857 articles at £3 16s. 4d. or £3 19s. 8½d., they invariably take all the aliquot parts for 16s. 4d. or 19s. 8½d., instead of finding the value at £4, and then deducting the difference.

It may be well to state that Inspectors frequently frame their sums to see if these points have received attention.

**SUMMARY OF POINTS TO BE OBSERVED IN
TEACHING ARITHMETIC.**

- (1) Frequent practice in mental arithmetic.
- (2) Sufficient exercise in notation.
- (3) Constant practice to ensure *accuracy*.
- (4) Use of Cards for *testing* not teaching.
- (5) Pass secured by accuracy
dependent on $\left\{ \begin{array}{l} (a) \text{ Tables.} \\ (b) \text{ Notation.} \\ (c) \text{ Practice in working} \\ \text{sums.} \end{array} \right.$
- (6) Intelligence tested by working of problems, knowledge of methods and results in mental arithmetic.
- (7) Abolition of mechanical aids,—finger counting, strokes, bobbing of heads, &c.
- (8) Variation of style of sums.
- (9) Formation and spacing of figures.
- (10) Arrangement of sums.

IX.

CLASS
SUBJECTS.

Article 109 (f) of the New Code says :—

A grant on examination in class subjects, amounting to 1s. or 2s. for each subject, is paid if the Inspector's report on the examination is fair or good.

(1.) The recognized class subjects are :—

1. English.
2. Geography.
3. Elementary science.
4. History.

5. Needlework for girls (according to the Third Schedule).

(ii.) For the purpose of examination in class subjects a school is considered as made up of two divisions.

(iii.) The lower division must contain the scholars presented for examination in the elementary subjects in the standards below the fourth, and the upper division those in the standards above the fourth. The managers may place in either division the scholars in the Fourth Standard.

(iv.) No more than two class subjects may be taken by either division. If only one subject is taken it must be English, if two are taken one of the two must be English.

(v.) If two class subjects are taken, the second must be, in the lower division, either geography or elementary science; in the upper division, geography, elementary science, or history, unless the scholars in the Fourth Standard are placed in the upper division, in which case that division may not take history.

(vi.) Girls may take needlework as a second class subject; but in this case the school cannot receive the grant of 1s. under Article 109 (c).

(vii.) If the girls in a mixed school take needlework, and the boys another subject, the grant may be paid on the average attendance of boys and girls separately. No pay-

ment for the girls' needlework will be made in this case unless the boys also take a second class subject.

(viii.) All scholars who are required to be presented for examination in the elementary subjects must be presented for examination in any class subjects that are taken, unless there is a reasonable excuse for their being absent or withheld from the examination.

(ix.) The scholars examined in the class subjects are examined in the classes in which they are taught.

(x.) The examination is, as a rule, oral in the lower division.

(xi.) The examination of the scholars varies according to their standards. The work for each standard is set forth in the Second Schedule.

The Code permits a certain liberty of choice to managers and teachers, but at the same time it must be understood that if class subjects be taken at all, English *must* be taken. In mixed schools, disappointment has occasionally been caused by the managers and teachers selecting, by mistake, *English* for the boys, and *needlework* as the class subject for the girls. This cannot be done, for in mixed schools, where needlework is taken as a class subject (Article 109 (f)), the boys and girls must take *English*, and the boys will be required to take, even if they do not pass in, a second class subject, to correspond to the second subject of the girls. The following variations in class subjects are allowable :—

- (1) English.
- (2) English + Geography in all standards.
- (3) English + Elementary Science „
- (4) English + Needlework „ (Girls' schools).
- (5) English + {
 - Elementary Science in Lower Division (Standards I.-III., or I.-IV.)
 - Geography in Upper Division (Standards IV., VII., or V.-VII)
 - Geography or Elementary Science in Standards
- (6) English + {
 - I.-IV.
 - History in Standards V.-VII
- (7) English + {
 - Either of the arrangements in 5 and 6
 - above (Boys).
 - Needlework (Girls).

Mixed
Schools

In teaching the class subjects, teachers are allowed to group Standards IV., V., VI. and VII. for geography and elementary science (or history, subject to Article 109 f. v.); but it must be observed that no grouping is allowed for English. The Instructions to Inspectors on grouping are:—

When the numbers in the upper division of the school, as defined in Article 109 f. iii., do not exceed 40 at the beginning of the school year, the children of that division may be treated as one class for instruction in class subjects. When the numbers exceed 40, the upper division should be divided into two groups at least. The grouping of standards is intended to work as follows:—Supposing the 4th and 5th Standards to form one group, and the 6th and 7th another, the former group will be required to take the work of the 4th and 5th Standards in alternate years, the latter that of the 6th and 7th Standards in alternate years. If the four standards—IV.—VII.—are placed in one group, they will take the subjects of each standard in turn. In schools in which there is a 7th Standard there must always be two groups in *geography* in the upper division.

In the selection of class subjects each teacher must judge for himself, and should consider his own special qualifications, also the opportunities and means at hand for scientific or other instruction. Other conditions being equal, any teacher will be likely to teach best the particular subject of which he knows most, and in which he takes the strongest interest. Whatever subject is taken in hand should be taught *well*, and it must not be forgotten that the results are reckoned as *good* or *fair*, according as three-fourths or one-half of the children examined satisfy the Inspector.

“The Code recognises as the means of instruction in geography and elementary science, reading books, oral lessons, and visible illustrations. But it does not prescribe the exact proportions in which these means shall be employed for each standard, and for each subject. Those proportions should be determined partly by the special plans and aptitude of the teacher, and partly by other considerations. In Standards I.

and II. it will not be necessary for you to insist on the use of a reading book, if provision is made for meeting the requirements of the Code by a systematic course of collective lessons, of which the heads are duly entered in the log-book. The best reading books for higher standards are those which are descriptive and explanatory, are well written, and suitably illustrated, and contain a sufficient amount and variety of interesting matter. When these conditions are fulfilled, and the reading lessons are so supplemented by good oral teaching as to enable the scholars to pass the prescribed examination well, the requirements of the Code will be satisfied, even though the course of lessons in the reading book does not correspond in all respects to the year's work of a particular standard."

This is not the place to discuss the advantages or disadvantages of teaching these subjects through Reading books, but as the selection of these Readers will have a great influence upon the results, great attention should be paid to it. A number of excellent books are published to meet these requirements of the Code, but teachers should choose those that possess the following qualifications:—

Essential
features of
good
Reading
Books.

- (a) The subject matter should be readable, interesting, and descriptive.
- (b) They should not be crowded with facts, being teachers' rather than scholars' books.
- (c) The phraseology should not be above the grasp of the average child.
- (d) The maps (in geographical readers) should be clear, and not crowded with names.
- (e) The illustrations should be appropriate, instructive, and works of art.

Bearing the above hints in mind, little difficulty will be found in selecting valuable books from the abundant supply now in the market.

X.

ENGLISH. It has been mentioned before that English *must* be the first Class-Subject for both boys and girls.

The term English is made by the Code to include (a) Recitation, (b) Grammar.

Recitation. *Recitation* should be made a most important agent of refinement and culture, a means of improving the style of reading, and a source of pleasure to both teachers and taught. In order that recitation might have this educative influence, the pieces should be judiciously selected, and the repetition of these pieces should be expressive and intelligent. Teachers should bear in mind that it is their duty to *select* the poems, and the Inspector's to *approve* of them, if they are suitable. In selecting, attention must be paid both to the *length* and *character* of the pieces. The Code specifies the minimum number of lines to be learnt in each standard, and the children are required in—

"Standard I. To recite 20 lines of simple verse.

" II " 40 " poetry, and to know their meaning.

" III. To recite with intelligence and expression 60 lines of poetry, and to know their meaning.

" IV. To recite 80 lines of poetry, and explain the words and allusions.

" V. To recite 100 lines from some standard poet, and to explain the words and allusions.

" VI & VII. To recite 150 lines from Shakespeare or Milton, or some other standard author, and to explain the words and allusions."

On this point the "Instructions to Inspectors" remark:—

"The recitation of a few verses of poetry has been prescribed in every standard, and it will be the duty of the teacher to

submit to you for approval on the day of inspection a list of the pieces chosen for the ensuing year. It is not necessary that the required number of lines should be taken from one poem; they may be made up from two or more, provided that each extract learned by heart has a completeness and value of its own, and is understood in relation to the story or description of which it forms a part. The extracts should be simple enough to be pleasing and intelligible to children, yet in Standards III. and upwards sufficiently advanced to furnish material for thought and explanation, to improve the taste, and to add to the scholar's store of words."

Very little remains to be said after the above remarks, but it may be suggested that poetry, not *doggerel*, should be chosen, and that whole pieces should be taught where possible, instead of fragments. If a teacher should wish to confine himself to the *minimum*, then he should only select poems of that length.

Most teachers wisely eschew Milton for Standard VI. and VII., as being beyond the comprehension of the average elementary school child. Macaulay's schoolboy might grapple successfully with the difficulties presented in most of his poems, but any attempt to teach the beauties of *Paradise Lost*, *l'Allegro*, *Il Penseroso*, *Comus*, &c., to average children, usually ends in disappointment.

The educational and moral value of recitation of poems depends to a great extent upon the way in which they are repeated, and in the majority of schools no subject displays less effective teaching. The repetition is often said in a monotonous and sing-song manner, without any attempt being made at proper pausing or phrasing, and the lines said with utter disregard of sentiment and suitable expression. In such cases the exercises are useless, and a waste of time. If the children were taught to recite their poetry, the exercise would be much more interesting to all concerned, inspectors, teachers, and scholars. The teacher should read the poem aloud with proper expression, and then explain the subject matter, phrase-

ology, &c., in a conversational lesson. This having been done, the children will feel some interest in the piece, and will then imitate the teacher's reading of it, verse by verse, much more intelligently. All defects of expression, pausing, intonation, &c., should be carefully corrected by the teacher. When the children have read the poem aloud a few times, and the teacher has given sufficient explanation, it should be written down as an exercise in transcription in the lower standards, and from dictation in the upper standards. The children in the upper standards should then paraphrase, analyse, and parse the lines, when it will be found that to commit them to memory is an easy task.

A poem thus taught would at any rate be understood, and the children would then more easily give proper expression to the sentiments it contains. It is quite a rare occurrence to find a school where the recitation of poetry is made a means of teaching elocution, but it sometimes falls to the lot of an inspector to hear the children bring out the feeling and pathos of the poem by proper expression, accompanied by suitable gestures and actions. Unless the children thoroughly understand the piece, they cannot be expected to recite it properly, and sufficient attention is not paid to the explanation of the lines learnt. One could hardly believe that children in our schools are so ignorant of the meaning of words and phrases, which they have repeated day after day for a whole year, or that these should have been passed over unnoticed by the teacher.

XI.

"The examination in this subject is not limited to technical GRAMMAR grammar, although parsing and analysis still form an important part of the requirements. The general object of lessons in English should be to enlarge the learner's vocabulary, and to make him familiar with the meaning, the structure, the grammatical and logical relations, and the right use of words. Elementary exercises of this kind have an important practical bearing on everything else which a child learns. From the first, the teaching of English should be supplemented by simple exercises in composition: *e.g.*, when a word is defined, the scholar should be called on to use it in a sentence of his own; when a grammatical principle is explained, he should be asked to frame a sentence showing how it is to be applied; and examples of the way in which adjectives are formed from nouns, or nouns from verbs, by the addition of syllables, should be supplied or selected by the scholars themselves. Mere instruction in the terminology of grammar, unless followed up by practical exercises in the use of language, yields very unsatisfactory results."

Nothing is required of the children in Standard I. except the repetition of their lines of poetry, but those in Standard II. are required to point out nouns and verbs. This can be made an interesting exercise for children, and grammar can from the first be taught through *analysis*. The children should not only be able to point out the nouns and verbs occurring in a sentence, but should from the first be taught to build up sentences by the use of nouns and verbs. This will greatly help to develop the intelligence of the children, and to lay a good foundation for future work. What Mr. Fitch, in one of his admirable "Lectures on Teaching," says on the subject of text

Grammar,
Standards
I. & II.

books might be also applied to teaching generally. He says:—"One good test of a grammar or delectus, or of a manual of any kind, is this: Does it, as soon as it has helped the student to *know* something, instantly set him to *do* something which requires him to use that knowledge, and to show that he has really acquired it? e.g., if it explains a new term, does it require the learner soon to use that term? If it states a rule, does it give him instantly occasion to put the rule in practice? If it points out a new logical or grammatical distinction, does it challenge him forthwith to find new instances and illustrations of that distinction?" The children should thoroughly understand and be ready to say why a certain word is a noun or a verb, and in many schools the work of the higher standards is anticipated by teaching the kinds of nouns, and how to distinguish them, and the simple inflexions—gender and number.

In pointing out verbs, the children should be instructed to take together the parts of a compound verb, and the particle "to" with the infinitive. This is frequently omitted, but when done, enhances the value of the teaching.

Grammar,
Standard
III.

The children in Standard III. are required "to point out nouns, verbs, adjectives, adverbs, and personal pronouns, and to form simple sentences containing them." Careful lessons should first be given on the adjective, adverb, and personal pronoun, separately, and the children, as soon as the lesson is given, should be asked to point out words which belong to the class of words or parts of speech forming the subject of the lesson, also to frame easy sentences containing that part of speech. Any mechanical means of detecting the words should be sparingly employed, the children being taught to recognize the parts of speech by the *function* they discharge in the sentence, instead of saying that such a word is an adverb because it ends in "-ly," and so on. It requires only a little thought to see that

this and similar rules are not true, and are not productive of any educational results. The children in this and the upper standards should be able to say *why* a certain word is a verb, or an adjective, from its use in the sentence, and not from its *form*. Exercises should be given orally and on paper, the former being so valuable on account of the great opportunities afforded of

- (a) Asking questions on the "*why* and *wherefore*" of each answer.
- (b) Deducing and imparting incidental information.
- (c) Developing the intelligence of the children.
- (d) Saving time.

The mode of examination in this standard is very much varied, some Inspectors requiring written answers, some verbal, and others adopting both methods.

The tests generally given are :—

- (1) A passage is taken from the reading book, or written on the black-board, and the children are required to point out the parts of speech specified.
- (2) A sentence is taken, and the children are asked to say or write what part of speech each of the words specified is.
- (3) The children are told to make up so many sentences containing certain parts of speech.
- (4) A few words are given, and the children are requested to frame sentences using these words properly.
- (5) Synthesis of sentences thus :—The examiner asks the children to give him the name of some object—*e.g.*, Clock—and by using this as a subject he deduces from the children the predicate and other parts of a sentence, such as this—The clock tells us when to go home, &c.

Great attention should be paid to the following points :—

- (a) Words sometimes used as one part of speech and sometimes

another. These cannot properly be dealt with unless children are taught to distinguish words by their *function*.

- (b) Forming of sentences, using certain parts of speech or given words:—*e.g.*, three sentences, each containing an adverb; three sentences, each containing a personal pronoun, &c.; or sentences containing each of the following words:—

work (noun)	land (verb)
work (verb)	land (noun)
him	land (adjective)
sweetly	second
down (adverb)	down (adjective).

- (c) It is advisable not to allow the so-called articles, whose selection is purely mechanical, to be included with the adjectives. Few Inspectors place any value upon them, and children are frequently led to neglect genuine adjectives for those, the picking out of which requires no trouble.

Grammar,
Standard
IV.

The children in Standard IV. are required "to parse easy sentences, and to show by examples the use of each of the parts of speech." It should be observed that the sentences for parsing need not be *simple* sentences, which would exclude the Relative Pronoun, but must be easy ones. The parsing in this and in the higher standards should be complete, and should show (a) the part of speech to which the word belongs; (b) the inflexions of each (if any); (c) the syntactical relations between the words. In some schools it is the custom not to refer to the case of a noun or pronoun, on account of its difficulty, but as the proper determination of the case of a noun or pronoun is a special test of intelligence, Inspectors generally lay great stress on it. It seems a pity that children are not required to analyse a simple sentence before parsing it. Some teachers very sensibly teach analysis first, and this is the true

order of things. Experience teaches that the following points are most often neglected :—

- (a) Proper determination of the *case* of a noun or pronoun, and *why* a word is in any case.
- (b) Classes of verbs—*e.g.*, *why* a verb is regular or irregular, transitive or intransitive.
- (c) The moods and their uses.
- (d) How to know the *number* and *person* of the verb, if it has any.
- (e) Connection between the pronoun and the noun for which it stands.
- (f) How to distinguish the *gender*, *number*, and *person* of a Relative, and what the *case* depends upon.
- (g) How to decline the Personal Pronouns.
- (h) Interrogative pronouns.
- (i) Comparison of adjectives.
- (j) Functions of adverbs, and the words with which they are generally used.
- (k) The syntactical relations of transitive verbs and prepositions.
- (l) Correction of badly constructed sentences.

Parsing should occasionally be done on paper, to ensure accuracy in spelling the terms used, which is sometimes very weak in schools where the parsing has been entirely oral. This shows at once that sufficient use has not been made of the Black-board.

A few suggestive questions on the passage below are here given for the guidance of young teachers.

Passage:—"One very cold winter's day I went to my friend's house, which is in London."

One What is the use of "one" in the sentence? What part of speech is it? What kind of adjective is it? Have

you heard of any other kinds? What are they? Make up a sentence containing an adjective of quality.

very What is the use of "very" in this sentence? What part of speech is it? With what parts of speech do you use adverbs? With which is it used here? Give me a sentence using an adverb (1) with a verb; (2) with an adjective; (3) another adverb.

cold Cold has been called an adjective. Why is it an adjective? Give me some other forms of this word which show degrees of coldness. What name do you give to these different forms? What is the superlative of sweet—of beautiful—of good; and the comparative of long—of bad—of lovely? When do you use the comparative? Repeat a sentence using an adjective in the comparative degree. Is this sentence correct or not?—This is the shortest way of the two. What should it be? Why was it incorrect before?

winter's What part of speech is "winter's"? One boy says a noun, the next says an adjective. Why does he say it is an adjective? Give me another sentence where a word, which is generally a noun, is used like an adjective? What *number* is the word winter's? Why did that one boy think it was plural number? Do all plural nouns end in "s"? Tell me a noun in the plural number which does not end in "s." In what case is the word winter's? Change this sentence so that the objective case of the word is used, without altering the sense of the sentence.

day In what case is the word "day"? What makes it be in that case? What other parts of speech govern an objective case?

What is the use of "I" in the sentence? What part

of speech is it? What gender is the word "I"? Why does he say "I" is common gender? Is the word "I" always common gender? When can you tell what gender "I" is? What number is the word "I"? Put another word in its place, and so make it plural number. What is the person of "I"? What do you mean by the 1st person? Put another word in its place and so make it 2nd person, and another to make it 3rd person. (This should be done in singular and plural of each person.) In what case is "I"? How do you know it is nominative case? What is the objective of "I"? Give a sentence using this objective. What is the possessive case of "I"? Is this possessive case formed like that of the word winter? What is the difference?

went

What is the use of "went" here? What part of speech is it? What kind of a verb is "went"? One boy says it is an irregular verb; what does he mean by that? By adding "d" or "ed" to what? What is the present tense of "went"? If "go" had been a regular verb, what would have been its past tense? Another boy said "went" was an Intransitive verb; what does he mean by an Intransitive verb? Give me a sentence containing a Transitive verb. In what mood is "went"? Why is it Indicative Mood? Name any other moods you have heard of. Give me a sentence using each of these moods. When do you use the Imperative Mood? What number is the word "went"? How do you know that? Use another word for its nominative case, and so make it plural. What person is "went"? Why is it 1st person? Put another word for its nominative, and make it 2nd person, another and make it 3rd person

(singular and plural). Can you tell simply by looking at the word "went" what number and person it is?

to What is the use of "to"? What part of speech is it? What does a preposition do in a sentence? What other words govern a noun or pronoun in the objective case?

which What is the use of "which"? What part of speech is it? What kind of pronoun? Why is it a Relative Pronoun? To what word does it relate? What do you call that word to which it relates? Do you generally find the antecedent *before* or *after* the relative pronoun? What gender is the word "which"? How do you know that? What else does the word "house" tell you about "which"? What number and person, then, is "which"? In what case is "which"? Does the word "house" tell you the case? How can you determine the case, then? What case is the relative pronoun in the sentence "Tell me who he is"? Is the sentence "The boy, who you saw, is dead," correct or not? Correct it, then. What is the possessive case of "who"?

Oral parsing lessons superior to written exercises.

The amount of instruction which can be given by means of these questions and answers, shows at once the practical superiority of *oral* over *written* parsing exercises. Where the examination of grammar is conducted on paper, teachers might greatly improve the appearance of the papers by giving a few hints on arrangement of answers. Much time would be saved by employing suitable abbreviations, and general character of work improved by attending to such trivial points as the use of inverted commas when words are referred to in the parsing, &c.

The scholars in Standard V. are required "to parse and analyse Grammar, simple sentences, and to know the method of forming English nouns, Standard V. adjectives, and verbs from each other."

It is a fact much to be deplored that analysis does not precede parsing, yet teachers too frequently make matters worse by leaving the teaching of analysis till the last month or so of the school year. Words can hardly be used strong enough against this practice, which should be at once discouraged by all lovers of education. The children should know what the essential parts of a sentence are, and of what these parts are generally composed: they should also understand when an object or completion of the predicate is necessary, and what is meant by an extension of the predicate, the adverbial function of which should be carefully pointed out. When children are asked to say what the difference is between a *sentence* and a *phrase*, very seldom do they give an answer any way approaching correctness. The children in this standard are only required to analyse a *simple* sentence, therefore it must not be expected that the sentence given will be quite straightforward in its arrangement. One occasionally finds children hopelessly floundering over analysis when the parsing is fairly good, and this tells its own tale. A good method of securing a variety of sentences for analysis is to take different poems, and cull as many sentences as possible from each. If these be preserved in a note book, and periodical additions be made, a large and valuable assortment will be always at hand. Such sentences as the following might be expected at the examination:—

- (1) And from the mountain's grassy side
A guiltless feast I bring.
- (2) That father, faint in death below,
His voice no longer heard.
- (3) Who will dare to chide me
For loving that old arm chair!

- (4) And I will give thee a silver crown
To row me o'er the ferry.
- (5) And in the churchyard cottage, I
Dwell near them with my mother.
- (6) But there was neither sound nor sight
To serve them as a guide.
- (7) At my feet, on the ground, lay a glittering diamond.

Printed
Table for
analysis un-
desirable.

Some teachers buy papers with the table for analysis printed upon them. This, although done with a laudable object, namely, to ensure neatness, is a mistake, and many Inspectors will not allow it. The printed table is too suggestive, and should *not* be used.

Word-for-
mation.

The formation of nouns, verbs, and adjectives from one another, is a most interesting feature of the New Code, and should be made a very pleasant exercise. Much of this teaching should be done in the reading lesson, and in one school in the writer's personal experience, where the word-building exercises were remarkably well done, all the teaching had been given incidentally in the reading lesson, the master having quite overlooked this requirement of the code. Such intelligent and unselfish teaching as this deserves great praise. The ordinary reading lesson will provide numbers of words for word formation, and these should be utilized as they occur.

The children should know the different ways in which these words are formed from one another, and be able to form them. They should also be able to give the meaning of the prefix or ~~suffix~~ used in the formation, so that if a boy has formed the verb "sweeten" from the adjective "sweet," he should be able to say that the "-en" has the force of "to make," hence "sweeten" means, to make sweet. He should also be able to give other words in which a similar formation is made, and reference should be made by the teacher to such a word as "enrich," in which "en" is a prefix, but has the same force. When a word has been formed from another, the child should frame a sentence using the word thus formed.

Suppose a teacher has the adjective "strong" under consideration, he might ask some such questions as these:—What *noun* is formed from the word "strong?" Make up a sentence using "strength" as a noun? Give another noun formed in the same way? What do all those nouns ending in "-th" denote? Name any other ending which forms nouns denoting abstract ideas, and give some examples? What *verb* can you form out of the words "strong" or "strength?" Form a sentence using "strengthen" as a verb. What is the ending used? What is the use of -en? Give me any other verb formed like this, where the "-en" means "to make."

When word-building is tested by means of a written examination, it is a good plan for the children to have a definite arrangement for the answers made beforehand, so as to avoid confusion.

The test prescribed for Standard VI. is "to parse and analyse Grammar, a short complex sentence, and to know the meaning and use of Standards VI & VII Latin prefixes in the formation of English words," and that for Standard VII is "to analyse sentences, and to know prefixes and terminations generally."

So much has been remarked on analysis that little now remains to be said. The children in these standards should not only be able to divide a complex sentence into its principal and subordinate parts, but from lessons on "subordinate sentences" should be in a position to state the kind of subordinate sentence, except in very difficult cases. They should also be able to form complex sentences, consisting of—

A Principal clause and Subordinate clause { (a) Noun Clause.
(b) Adjectival "
(c) Adverbial "

as required by the teacher or examiner.

The knowledge of prefixes is very useful to advanced pupils, and Prefixes should receive due attention. The children in Standard VI. should

know the meaning of the Latin prefixes, be able to give words in which they are used, and to show the force of the prefix in each word ; or if words containing prefixes be given, they should be able to separate the prefix from the root, to give the meaning of the prefix, and to give other words in which the same prefixes are used.

Analysis of words.

A good exercise for Standard VII is what might be called "Analysis of Words." The children would be prepared to analyse a word thus :—

Word.	Meaning of Word.	Prefix.	Meaning of Prefix.	Root.	Meaning of Root.	Suffix.	Meaning of Suffix.
Contradiction	A speaking against	Contra-	Against	-dic	to speak or say	-tion	state of
Resistible	Capable of standing against	Re-	Again	-sist	to stand	-ible	capable of

XII.

Geography is the second class subject most commonly taken in schools, and when taught in a scientific, intelligent way, it is most popular with children. Where this subject is taken, geographical reading-books must be used in the school, but if the results are to depend entirely on these reading lessons, without oral teaching, they will be disappointing.

GEOGRAPHY.

Geographical Reader necessary.

In the Blue Book, Mr. Holmes says, "Globes are now in general use in Standard II., and blank wall maps in Standards III-VI, and to the extended use of these appliances, far more than to the introduction of geographical reading-books, I am inclined to attribute the progress that has been made. I am doubtful, to say the truth, whether these reading-books have not done more harm than good. If they have not, the illustrations are to be thanked, not the text. Once or twice I have had to examine a class in which oral teaching has been entirely neglected, and total failure has been the invariable result. The fact is that written exposition makes little or no impression on the mind of a child. At best it remains on the surface of his consciousness, ready to be effaced by the first distracting influence. The very same explanation which, if spoken by the teacher with all the accessories of emphasis, iteration, and illustration, might be readily understood, would change itself into a riddle the moment it was transferred to a book. Good books of travel, tending as they do to awaken interest in places and peoples, are invaluable adjuncts to a geography lesson, but text-books and hand-books—books that catalogue facts, and books that explain and expound—ought, in my opinion, to be kept out of the hands of children."

Globes and blank Wall Maps.

Neglect of oral teaching results in failure.

To secure good results much oral teaching must be given, and this by skilful teachers.

Geography,
Standard I.

The children in Standard I. are now required "to explain a plan of the school and playground. The four cardinal points. The meaning and use of a map." The teaching of these points should not be entrusted to a junior teacher, unless he has a special aptitude, and is properly guided by a responsible teacher, for the first lessons on a subject should be made as interesting as possible, so that a craving for knowledge on the subject may be cultivated. The following remarks by Mr. Blakiston in the Blue Book (1882) deserve notice.

"Many teachers bewilder children by beginning with the points of the compass. The simpler and better way is first to draw attention to the shape of the room, leading them to note things of like shape, as books, slates, windows, doors, panes, and panels. The next step is to sketch in chalk on the floor a rough outline of the floor as bounded by the walls, marking doors, fireplaces, but not, as is sometimes done, windows. It will then be an amusement to the children to point out where the desks, cupboards, and other fixtures should be marked in the plan. Next let the same plan be roughly drawn on the blackboard, but not always of the same size, till the children are thoroughly familiar with the shape, position, and proportion of all that should be shown in the ground plan. Let them be encouraged to draw on their slates rough plans of the room to show their parents where they sit in school, and to bring from home plans of their living rooms. Objects should now and then be misplaced in the plan, or lines exaggerated in size, so as to test and rivet attention, and to train the eye to accuracy. The children will soon want names for the four walls and corners. Then, and not till then, when the want has been created, should the eight chief points of the compass be taught, and the children encouraged to notice sunrise and sunset, morning, evening, and noontide shadows, winter and summer sunshine, and so on.

It will now be well to draw plans of the school premises

roughly to scale.* Thus in large rooms the walls may be roughly measured by counting steps, in class-rooms by actual measurement with rule or tapes. It is well to draw these plans on scales gradually reduced, so as to be able to take in more and more of the surroundings.

If this work has been well done in the 1st Standard, the 2nd Standard should be able to make rough plans of their village or town, and of the surrounding ground so far as they can walk. Measurement may be got sometimes by milestones, sometimes by stepping, sometimes by the time* taken to walk distances, and sometimes by counting houses. If the scale be gradually reduced, till first the school, then the village or town, becomes a mere point, the use and meaning of a map will gradually dawn upon the children, who will have been led from the known to the unknown. Thus taught they will not be likely to think that a map of England, on the scale of an inch to a foot, could be hung up in their schoolroom."

The children in Standard I. should be able—

- a) To answer questions on a prepared plan, or one drawn on the blackboard—to point to the position on the plan of objects in the room, *e.g.*, desks, fireplaces, doors, &c.
- (b) To draw a plan on slates, and to mark the points of the compass on the same.
- (c) To place a slate with the points of the compass marked on

in chalk thus



in its proper position on the floor.

- (d) To answer questions on the points of the compass, put in different forms, *e.g.* :—

(1) I am taking a walk at noon, and find that the sun is shining directly on my back. In what direction am I walking?

(2) As I was going home I had to walk towards the

* It is assumed that the children know that there are 60 minutes in an hour.

west, and the sun was shining in my face. What time of the day was it?

(3) I took a walk through the fields at noon, and saw my shadow in front of me. In what direction was I walking?

(4) There are blinds to those windows (teacher points to south wall), and none on that side (pointing to the north wall). Why is that?

(e) To know the meaning and use of a map.

Standard II.

In teaching the *size* and *shape* of the earth, comparison should be made with familiar objects, yet the children must not be led to suppose that the shape of the earth is faithfully represented by the shape of an orange. When the geographical terms are explained to the children, the physical features of the neighbourhood should be taken as illustrations; but sometimes children are quite ignorant of the presence of a hill, valley, island, lake, &c., in the immediate neighbourhood of the school. The children are too often taught "definitions" of the geographical terms, instead of their meaning, and many, whilst ready with the definition: "An island is a portion of land surrounded by water," are quite incapable of answering intelligently a simple question on the same. The "physical geography of hills and rivers" does not mean the cramming up of the terms used for the different parts and definitions of them, but an intelligent understanding of the same. It is no uncommon occurrence to find that children do not know whether a man standing where the river commences, or one standing at its mouth, would be the higher above the sea; on which bank of a river a town that a man sees on his left hand when rowing up the river, is situated; or that a stream chooses the bottom of a valley for its bed. If more attention were paid to illustrating these lessons, by modelling in clay and sand, the geographical terms would be better understood.

Every school should possess a map of the district in which the school is situated, and the geography of the district should be carefully taught, then the children will be more likely to grasp that of the country. It will be found a good plan to have a list of names of places surrounding the school, and the distances to each, hanging up in the school for reference. Some teachers spend too much time in cramming the children with strings of names, heights of mountains in feet, lengths of rivers in miles, without any comparison of these with well-known distances. By this method most ridiculous impressions are set afloat, and a class of children has been found unable to say whether the height (given by the children in feet) of a mountain is a greater distance than that to a neighbouring church 100 yards off, or not. Blank maps are especially useful for testing, and should be in every school. A practice which has produced good results is that of letting the children draw their own maps, and put in only the names of places, &c., mentioned in the reading books and lessons. This is sometimes given to be done as home lessons, and the children are questioned on their maps for a few minutes daily. In a few schools maps of countries are painted or drawn in chalk on the blackboard, and this is put on the floor in the proper position with regard to the compass, the children standing round. Still better is it when a boy can be asked to draw on the floor a map of some country, or part of it, and then walk round the coast from place to place, and so on.

When questions are answered readily on the names and positions, &c. of the physical features of England, it commonly happens that the children know next to nothing on the industries, the districts where they are carried on, and why confined to these districts. In general words, geography should be taught on a *physical* basis in all the standards. It not unfrequently happens that a teacher is deceived as to the knowledge possessed by his scholars, through the style of

questioning adopted in testing it. Instead of confining the questions to certain areas, and thoroughly gifting the facts known, they fly off from one place to another in a desultory manner. In this way the geography of the world is examined in a few minutes, but the impression formed of the attainments is deceptive.

Work of
Higher
Standards.

The work of Standard IV. needs no specific remarks, but on latitude and longitude something must be said, for this branch of geography is extremely useful and interesting. To teach latitude and longitude properly, very much more time is needed than is often given to it. The children should know the meanings of the terms, why the knowledge of the latitude of a place is important, how the circles called parallels of latitude diminish in size from the equator to the poles, and should clearly understand how it is that 90° is the highest latitude. They should also know what places in the same latitude have in common, and the effect that the latitude of a place has on its climate. The necessity of having the circles called meridians of longitude marked on our globes and maps, the difference between meridians of longitude and parallels of latitude, how longitude is measured, the constancy of the length of a degree of latitude, whilst that of a degree of longitude is variable, that places on same meridian have *noon* at same time, the relation between the longitude of places, and difference in time of these places, should be clearly understood. The children should be able to calculate the *longitude* of a place, having given the local time and that of Greenwich, and to find the *local time* when the longitude is given.

The causes of day and night, of the varying lengths of these, and why we have different seasons, should be properly explained.

In order to teach these things well, a globe of suitable size should

be at hand, for without it the children get a very poor idea of the rotation of the earth, &c.

The work of Standards VI. and VII. is very important, and requires careful preparation, not only on the method of teaching, but often of the subject-matter taught.

"To obtain the mark 'good' for geography, the scholars in Standard V. and upwards should be required to have prepared three maps, one of which, selected by the Inspector, should be drawn from memory on the day of inspection. In teaching geography, good maps, both of the county and of the parish or immediate neighbourhood in which the school is situated, should be affixed to the walls, and the exact distances of a few near and familiar places should be known. It is useful to mark on the floor of the school-room the meridian line, in order that the points of the compass should be known in relation to the school itself, as well as on a map."—(*Instructions to Inspectors.*)

If History be taken as a second Class Subject in Standards V.-VII., a graduated scheme of teaching it must be submitted to the Inspector, and approved by him at the previous inspection.

XIII.

MUSIC AND
SINGING.

The refining influence of Music and Singing in schools is generally recognised, and it should be so employed as to form a means of recreation in the midst of hard work. Thus it will be found much more beneficial to have a short lesson of about ten minutes daily than one or two long ones weekly ; and by adopting this method the children's voices will be kept in regular practice.

The Code now recognises singing as taught by *ear*, for which a grant of 6d. per head on the average attendance is paid ; and by *note*, for which a grant of 1s. per head is paid ; but true educationists will not consider the subject from a pecuniary point of view. Those who teach singing by *ear* have to spend a fair amount of time in teaching the songs, and when this is done the children have acquired nothing which will enable them to learn the songs for the next year, so that the time given to such teaching is, to a great extent, thrown away. On the other hand, if children are taught music, they acquire an art which is at once elevating and instructive, and may become a source of pleasure through a whole life ; for

"Music can noble hints impart,
Engender fury, kindle love ;
With unsuspected eloquence can move,
And manage all the man with secret art."

Unfortunately, some teachers are quite unable, through neglect of training, to teach singing from notes, but as there are so many opportunities nowadays of learning music, very few should be able to plead this as an excuse. Whether singing be taught by *ear* or by *note*, teachers one and all should make a combined effort to eradicate

from our schools what is commonly called *singing*, but is nothing more nor less than *barreling*, and especially in Boys' Schools. It must not be forgotten that, unless the children be taught to sing sweetly and with expression (whether by note or by ear), no singing grant can be expected. In order that children may sing with good expression, the songs taught must be suitable—the *words* should be childlike, such as the children can understand and appreciate—the *music* must be such as they can sing with pleasure, and can carry away to be a source of enjoyment to themselves and to their friends. There is too great a tendency at present to discard the old school song, so full of sentiment and moral teaching, in order to take up pieces which the children can neither appreciate, enjoy, or sing with any degree of satisfaction. This is sometimes done to please Inspectors, who ask the teachers to teach the children to sing *good* music, and so occasionally one hears delightful compositions entirely spoiled, either by parts of the harmony being left out, or, worse than all, by the children, with unbroken voices, singing the *tenor* and *bass* parts an octave higher, thus producing a combination of sounds extremely inharmonious. This practice is so absurd that anyone with a very slight musical knowledge would not think of adopting it. Many teachers forget that pieces which were very enjoyable to themselves in the training college or choral society, may be entirely unsuitable for children.

For either the lower or higher grant *three* songs must be prepared in the first division, and *five* in each of the other divisions. There is no objection to a repetition of some of the same songs in different divisions. A school which has applied for the higher grant, but has failed to secure it, may be recommended for the lower grant of *sixpence* without further examination, if the Inspector is of opinion that the time and attention devoted to music would have secured the lower grant.

Teaching
by Note.

It is not necessary here to discuss the methods of teaching by note, for teachers will teach that notation which they know best, or have greater aptitude for teaching. However, it has been found that the Tonic Sol-fa method is so suitable for children, on account of its simplicity, that the vast majority of teachers adopt that system. The systems generally taught may be classed as :—

- (a) Tonic Sol-fa system—generally adopted when singing is taught by note.
- (b) Staff Notation—movable doh—usually taught where this notation is adopted.
- (c) Staff Notation—Hullah's system—very rarely taught.

The first two systems are alike in method, but differ in notation, and to every one, except a bigot, the Staff notation presents difficulties which are avoided in the Tonic Sol-fa notation, and this accounts for the difference in the results of the two notations. The application of the Tonic Sol-fa method to the Staff notation is a matter of no difficulty, and many Staff notationists teach the Staff through the Tonic Sol-fa. In schools where both the Staff and Tonic Sol-fa systems are taught, different divisions may be presented in either notation.

Whatever system be adopted, the exercises to be performed by the children are practical ones, and the circular showing the requirements for the several standards is undoubtedly drawn up by practical teachers of music. The following points, neglect of which often causes disappointment, will, it is hoped, be of service.

Classifica-
tion in
Divisions,
not
Standards.

First, as to the classification of the children. The music requirements are divided not into *standards*, but in *divisions*, and the proper grouping of standards is not always carried out. The children should be classified as follows :—

Division I	Infants.
Division II	Standards I and II

Division III.

Standards III. and IV.

IV.

V.-VII.

This (grouping), of course, only applies to large schools; in small schools inspectors may permit any grouping which they think justified by the circumstances. If desirable, small schools may be examined in two divisions only, provided that a certain number of children in each of the two divisions are able to pass some of the tests applicable to Divisions II. and III. respectively. In schools not having more than one certificated teacher, the songs may be sung in one part only, instead of two parts; and no higher tests should be required of Standard V. and upwards than those of Division III." (Circular 246, bearing date Nov. 29th, 1884).

Next, as to the code *requirements*. These are stated in detail in Circular 246 of the Education Department, which should be possessed by all teachers. Whatever system be taught, the requirements are divided into

- (a) Note Tests. If the Tonic Sol-fa method be taught, these exercises are given from (1) The Modulator. Require
ments.
- (2) Written or printed tests.
- (b) Time Tests.
- (c) Ear Tests.
- (d) Song Tests.

These are generally the most satisfactorily performed of all the tests, but still there is room for great improvement. The children should be taught to sing the exercises in a sweet tone, and firmly. If they hesitate in singing an interval, a mistake almost invariably follows. The modulator tests are sometimes sung *staccato*, but more frequently in a *drawing* fashion, both styles being very objectionable. The most common cause of failure is, that the children are unable to sing the tests given by a stranger, on account of the teaching having run in a groove. This should be remedied by

a variety of exercises. In the 3rd division (Standards III. and IV.) the *fe* and *ta* of the Tonic Sol-fa notation, of F sharp and B flat in the scale of C in the Staff notation, with the contradicting naturals of each of these, are frequently sung incorrectly, and therefore require great attention, especially the B flat or *ta*. Very frequently teachers of the Staff notation increase the difficulty of singing these tones by calling F natural and F sharp both by the same name, *fa*, and give B natural and B flat the same name, *si*, instead of adopting the recognised modification of vowel sounds. The 4th division (Standards V.-VII.) have to sing using the Sol-fa syllables, diatonic passages involving a change of key, and the minor mode using the sharpened sixth, thus *l se l*. These should present little difficulty if the nature of a transition be understood, but it must be observed that the note tests in this division are not to be given from the modulator, but from *printed or written tests*, and this increases the difficulty of them.

Points to be aimed at in this branch :—

- (a) Accuracy in singing intervals.
- (b) Sweetness of tone.
- (c) Firmness in singing the tones of an exercise.
- (d) Prevention of drawing or staccato singing.
- (e) Avoiding exercises which run in a groove.

Time
Tests.

Children generally sing the time tests as if they never understood the meaning of them, and a few questions addressed to the teacher often reveals the fact that *time* is very rarely taught properly. If the subject be well taught it is very interesting, and the children should thoroughly understand :—

- (1) That in speaking and singing, accents occur at regular intervals.
- (2) That these accents differ from one another—some are strong, some weak.

- (3) That the accents are grouped in *two's* and *three's*.
- (4) That music must be arranged to suit these accents.
- (5) That a *measure* or *bar* in music is the *interval of time* between one strong accent and the next.
- (6) That four-pulse measure and six-pulse measure (4 and 6 beats to the bar), are modifications of two-pulse and three-pulse measure.

All the above facts should be clearly shown by the use of sentences which illustrate them. If this be done, the children would at once know the kind of measure (number of beats to the bar) a piece of music is written in, and in addition could tell on what pulse or beat of the measure it commences. The children should generally be questioned on these points.

The *time tests* are to be sung on monotone to "laa," and in doing this the children should be careful to sing these "laa's" smoothly, clearly sounding the consonant "l" for each new tone, and holding on the vowel sound its proper length of time. Very rarely do children properly observe the whole pulse (beat) rests on the non-accented portions of the measure (bar), the preceding note being made to rob it of a part or whole of its time.

Children who have sufficient practice in imitation of phrases Ear Tests from the beginning of their school life, become very proficient in naming the notes of a phrase of 3 or 4 tones of the scale when heard in connection with the key-tone. All children have not what is called an ear for music, but much can be done by cultivation to atone for a natural deficiency. If a child cannot sing in tune it is because the ear needs training. The kinds of tests given to each division are fully explained in Circular 246, and should be carefully studied.

The children in each division are required to sing sweetly a school Song Test song, in good time and tune, and with suitable expression. In Division III the singing must be in two parts, and in Division IV.

in two or more parts; except in schools not having more than one certificated teacher, where the songs may be sung in one part only, instead of two parts.

For either the lower or higher grant, *three* songs must be prepared in the first division, and *five* in each of the other divisions. There is no objection to a repetition of some of the same songs in different divisions.

Great attention should be paid to the singing of these songs, so that they may be a pleasure to the singer, and to the listener. Occasionally the singing is so coarse, loud, and shrieking, that it is painful to listen to, especially in Boys' Schools. In the preparation of the school songs, due regard should be paid to

- (a) Selection of words and music suitable for children;
- (b) Posture of the children when singing;
- (c) Correctness of time and tune;
- (d) Pronunciation of words— { (1) Vowel sounds;
- (2) Articulation of consonants;
- (e) Suitable expression;
- (f) Blending of voices and parts.

Children cannot sing properly if their posture for singing is wrong. They should *stand* comfortably upright, and not like sentinels on guard; their arms should not be folded either before or behind, but should hang naturally by the side; and the head should be *erect*, not thrown back. The harshness of the singing in schools is largely due to the habit of English boys, of speaking and singing with their mouths nearly shut. To prevent this will tax the teacher's resources; but, nevertheless, the mouths must be well opened if the singing is to be good.

It is strongly advisable for the teacher to read the words of the song to the children, the sentiment of each verse being carefully explained. The children would then understand the piece, and show their appreciation of it by singing with suitable expression.

XIV.

THE ANNUAL EXAMINATION.

Form IX. and Schedules should always be ready at the school, at the time fixed for the *commencement* of the examination. Particular attention should be paid to the filling up of Form IX., for any omission would cause a delay in receiving the report of the school.

Now that the number of attendances made by each child has nothing at all to do with the Examination Schedules, they can be filled up and signed a week or so before the end of the school year, if necessary.

The Exception Schedule, which has lately been introduced, must be filled up and signed ready for the examination. On this schedule the names of children who are—

- I. Absent or withheld from the examination. Article 109 (e) (iii.)
 - II. Presented in the same standard as at a previous examination, or in a lower standard. Articles 109 (e) (iv.), and 113 (b) (ix.)
 - III. Presented in a specific subject in the same stage as at a previous examination, or in a lower stage. Articles 109 (g) (vii.), and 113 (b) (ix.)
- N.B.—(a) The name of every scholar entered on this schedule must also be entered on the Examination Schedule in his proper standard.
- (b) Enter consecutively all scholars proposed for exception
 - under each of the above heads, drawing a line at the end of each section
 - (c) Scholars whose names are placed on this list under head (I.), will not, as a rule, be examined in any standard; and

scholars whose names are entered under heads (II.) and (III.), will be examined in the standard or stage in which they are presented.

This Exception Schedule cannot, of course, be completely filled up before the morning of the examination day, on account of cases of absence.

Materials
for
Examination.

Sufficient materials, such as slates properly ruled, suitable pencils, writing paper, pens, ink, and blotting paper, should be provided before the examination day. It is a good custom to have the headings of the examination papers filled up a day or two beforehand, either by the teachers or the scholars themselves. Each paper should bear the following heading:—

- (a) Name of school
- (b) Name of scholar.
- (c) Standard in which each child is presented.
- (d) The Schedule No. of each child.

Every preparation should previously be made, so that on the day of examination there shall be no confusion or avoidable delay. Any maps or charts of tables, &c., which bear on the examination work, should be turned round, and exercise books with tables on the cover should not be given out for laying the papers upon. The sets of reading-books should be so placed that they can be given out as quickly as possible. Any lists which may be required by the Inspectors, such as a list of songs, &c., should be written out beforehand.

On the day of examination the children should be arranged in schedule order throughout the school, so that no time shall be lost in collecting the papers, registering the results of the slate work, &c., or the school thrown into confusion in doing these things. Each child should know his schedule number and his place in the

class, and but a little practice in these matters a day or two before the examination will put everything right.

Before the hour fixed for the examination, each teacher should see that every scholar is supplied with all necessary materials, viz. :—slates, pencils, and books in Standards I. and II. ; paper, pen, ink, blotting paper, and books in Standard III. and upwards. The children should on no account be allowed to sit doing nothing, waiting for the Inspector. There is a no more difficult task to children than to sit still, and as Inspectors may be delayed through various causes, the children would become tired and fidgety before the examination commences. The ordinary work of the Time-table should be going on, but such preparations made before-hand—*e.g.*, giving out of papers, &c.—as will enable the Inspector to begin the examination at any moment.

Some Inspectors like the children of the several standards *mixed*. This is done to prevent copying, but it is extremely doubtful whether the practice does not actually aid the children to get assistance unfairly ; for if a Third Standard child be sitting next to one in the 5th Standard, he is more likely to get a hint on the working of a sum or the spelling of a word than if he were sitting next to one of his own standard, who would probably have enough to do with his own work. If a sufficient variety of cards be used, and due supervision exercised, there seems to be no advantage in mixing the children. Teachers, however, should, as far as possible, adopt the means which best suit the method of examination of their own Inspector.

PHILIPS' SERIES OF SCHOOL ATLASES.

New and Revised Editions.

The Training College Atlas contains 24 of the finest Maps ever printed, and forms the best reference Atlas for Schools and Colleges ever produced. 18s.

Philips' Comprehensive Atlas contains 42 Modern and 18 Ancient Maps—the Atlas for the higher forms. With Index. 10s. 6d.

Philips' Student's Atlas contains 43 Modern and 5 Ancient Maps, beautifully drawn and coloured. With Index. 7s. 6d.

Philips' Select Atlas contains 36 selected Maps, with Index. The most suitable Atlas for the middle forms. 5s.

Philips' Introductory Atlas contains 24 finely-drawn and well-printed Maps. With Index. 3s. 6d.

Philips' Young Student's Atlas contains 36 authentic Maps,—the Atlas for young Geographers. With Index. 3s. 6d.

Philips' Young Scholar's Atlas contains 24 Maps, with Index. The most useful Atlas for young Scholars. 2s. 6d.

Philips' Atlas for Beginners contains 34 fine Maps, and forms the most popular Atlas for Junior Classes ever published. With Index. 2s. 6d.

Philips' Handy Atlas contains the same Maps, but folded on guards, forming a really 'handy' Atlas. With Index. 2s. 6d.

Philips' Excelsior Atlas is the cheapest 1s. Atlas published, and contains 100 Maps, Diagrams, &c.

Philips' Favourite Sixpenny Atlas is the cheapest and best 6d. Atlas ever produced. It contains 80 Maps, Illustrations, &c.

Philips' Physical Atlas illustrates fully every department of Physical Geography. 5s.

Philips' Physical Atlas for Beginners is, as its name implies, adapted for the younger scholars only. 2s.

Philips' Classical Atlas gives invaluable aid to all classical students. With Index of Ancient and Modern Names. 3s. 6d.

Philips' Handy Classical Atlas contains the same Maps but no Index. 2s. 6d.

Philips' Scripture Atlas should be in the hands of every Bible Reader and Student. 1s.; cloth, 1s. 6d.

Philips' Smaller Scripture Atlas is admirably adapted for Sunday Schools and Bible Classes. 6d.; cloth, 1s.

Specimens post free on receipt of the published price.

Crown 8vo, 380 pp., strongly bound in cloth, price 3s. 6d.

CLASS-BOOK OF MODERN GEOGRAPHY.

With Examination Questions, Notes, and Index.

• • BY **WILLIAM HUGHES, F.R.G.S.,**

Late Professor of Geography in King's College, London.

New Edition. Revised and Enlarged

• BY **J. FRANCON WILLIAMS, F.R.G.S.,**

Author of "The Geography of the Oceans," &c.

"This excellent text-book of Geography has been revised and brought down to the present year by Mr. J. Francon Williams, whose work has been done most satisfactorily in all respects. The name of William Hughes is, of itself, a passport to the accuracy and merits of any book on Geography, and there is no reason why the work before us should not take the place among the first, if not of itself the first, of geographical class-books. In addition to unfailing accuracy, this book possesses some unusually meritorious features. Among these are a set of the best geographical questions to be met with. Next we may notice the value of the explanations and derivations of geographical names. These are in most cases traced to original sources, instead of being merely copied from second-hand or questionable authorities. . . . The amount of information contained in the 380 pages of this admirable class-book is remarkable. And when we state that this is not given in a bald way, but with a fair amount of explanation, and in a readable style, we say nothing more than the book merits, but which few books of the same nature and design possess."—*Practical Teacher*.

"The new edition by Mr. Williams brings it up accurately to the present state of our knowledge. . . . It is in every respect admirably adapted for the purposes of tuition in our higher-class schools."—*DR. MILLER, Perth*.

"A work which, for clearness, fulness, and excellence of arrangement, can hardly be surpassed."—*Literary World*.

"I have examined it carefully, and I know no text-book on the same subject that can be compared to it."—*T. W. WALLACE, Esq., High School, Inverness*.

Imperial 8vo, strongly half-bound, price 10s. 6d.

New Edition: Revised and Enlarged.

PHILIPS' COMPREHENSIVE ATLAS.

Containing Forty-two Modern and Eighteen Ancient Maps, with a carefully compiled Index. The Maps beautifully printed in colours and thoroughly revised.

EDITED BY

WILLIAM HUGHES, F.R.G.S.,

Late Professor of Geography in King's College, London.

• This Atlas is specially designed to accompany Professor Hughes's
"Class-Book of Modern Geography."

Foolscap 8vo, handsomely bound in cloth, price 2s. 6d.

GEOGRAPHY OF THE OCEANS.

PHYSICAL, HISTORICAL, AND DESCRIPTIVE.

With Maps and Charts, &c. By J. FRANCON WILLIAMS, F.R.G.S.

"It is an admirable work. . . . We know nothing better, whether for the school-room or the advanced student. . . . All the latest authorities have been drawn upon, and the author has made an excellent use of his materials."—*Educational News*.

" . . . The best arranged and best written work of the kind which we can remember to have seen for a considerable period."—*Shipping and Mercantile Gazette*.

"Successful in every way. . . . Thoroughly well done. . . . We strongly recommend the book."—*Practical Teacher*.

The best Atlas-Geography published.

PHILIPS' ELEMENTARY ATLAS AND GEOGRAPHY.

With Complete Sets of Examination Questions, and Thirty Coloured Maps. Crown 4to, cloth, 3s. 6d. Edited and arranged by J. FRANCON WILLIAMS, F.R.G.S.

GEOGRAPHY OF THE BRITISH COLONIES and FOREIGN POSSESSIONS. By the Rev. JOHN P. FAUNTHORPE, M.A., F.R.G.S., Principal of Whitelands College, Chelsea. *New and Revised Edition.* Crown 8vo, cloth, price 2s. 6d.

"A complete manual of instruction on our colonial possessions. Historical and geographical facts are skillfully blended. . . . We confidently recommend the work to students and others who require full and accurate information on this branch of geographical study."—*The Schoolmaster*.

This Work is designed as a Handbook to

PHILIPS' ATLAS OF THE BRITISH EMPIRE THROUGHOUT THE WORLD. With Explanatory and Statistical Notes, by JOHN BARTHOLOMEW, F.R.G.S. Imp. 8vo, cloth, 3s. 6d.

"An excellent atlas. The maps are clear and distinct."—*Glasgow Herald*.

"The maps are minutely accurate, clearly printed."—*The Schoolmaster*.

By W. LAWSON, ST. MARK'S COLLEGE, CHELSEA.

OUTLINES OF GEOGRAPHY, for Schools and Colleges. *New Edition, entirely Rewritten and Extended.* Fcap. 8vo, cloth, 2s. 6d.

This Book may also be had in Parts, viz. :—

I.—The British Islands, 6d.

III.—Europe, 9d.

II.—The British Colonies, 6d.

IV.—Asia, Africa, America, 1s.

THE GEOGRAPHY OF RIVER-SYSTEMS.

New and Revised Edition. Foolscap 8vo, cloth, 1s.

THE GEOGRAPHY OF COAST-LINES.

New and Revised Edition. Foolscap 8vo, cloth, 1s.

PHILIPS' GEOGRAPHICAL READERS.



SPECIMEN OF THE ILLUSTRATIONS.

THESE Readers have been most carefully prepared, and the Publishers feel confident that in the treatment of the subject, the style and quality of the matter, the number and beauty of the illustrations, the legibility and accuracy of the maps and diagrams, the Books will be found superior to any other similar series, and will render the study of Geography interesting and attractive. The Series contains no less than 800 valuable illustrations and maps.

1. **FIRST STEPS, PART I.**, explaining 'plans of school and playground, the cardinal points, and meaning and use of a map.' With Word-lists and summaries, 45 Lessons, 97 Illustrations, Diagrams and Maps. 128 pp. cloth, price 9d.

2. **FIRST STEPS, PART II.** 'The size and shape of the world, geographical terms simply explained and illustrated by reference to the map of England, and physical geography of hills and rivers.' 47 Lessons, and 100 Illustrations, Diagrams and Maps. 140 pp., cloth, price 10d.

3. **ENGLAND**, Physical and Political, giving in a graphic narrative form the 'physical and political geography of England.' With 137 Illustrations and Maps. 192 pp., cloth, price 1s.

4. **BRITISH ISLES, BRITISH NORTH AMERICA, AND AUSTRALASIA**, described in a series of well-written sketches of voyages, travels, &c. 81 Lessons, 54 Maps, and 109 Illustrations. 256 pp., cloth, price 1s. 6d.

5. **EUROPE**, Physical and Political, described in a series of narratives of voyages and tours. With Appendix—Latitude and longitude: day and night: the seasons. 66 Lessons, 119 Illustrations, and 19 Maps. 288 pp., cloth, 1s. 9d.

6. **THE WORLD**: A series of voyages and travels in Asia, Africa, America, and Polynesia. With Appendix—Interchange of productions: circumstances which determine climate. 67 Lessons, 118 Illustrations, and 35 Maps. 320 pp., cloth, price 2s.

The Publishers will forward copies for examination with a view to introduction, post free, on receipt of half the published price.

PHILIPS' HISTORICAL READERS.



SPECIMEN OF THE SERIES OF VIGNETTES.

EVERYTHING that could in any way enhance the educative value of these Readers has been done, and the Series is acknowledged to be unequalled for both Teachers and Scholars. The Four Books of which the Series consists afford the best possible material for a complete course of Historical Reading for all classes of Schools. The Series contains no less than *three hundred and forty-four* fine Illustrations and *thirty-seven* valuable Maps and Tables. Specimens free on receipt of half the published price.

- BOOK I.—STORIES FROM ENGLISH HISTORY.** 60 interesting Stories, with full Notes and 80 Illustrations. Cloth, 1s.
BOOK II.—EARLY ENGLAND, to 1154. 63 Lessons with useful Notes, 94 attractive Pictures, and 6 specially-engraved Maps. Cloth, 1s.
BOOK III.—MIDDLE ENGLAND, 1154 to 1603. 61 Lessons with valuable Notes, 77 beautiful Pictures, and 9 fine Maps. Cloth, 1s. 6d.
BOOK IV.—MODERN ENGLAND, 1603 to the Present Times. 64 excellent Lessons, with Explanatory Notes, 93 Illustrative Pictures, and 8 Reference Maps. Cloth, 1s. 6d.

PHILIPS' STANDARD POETRY BOOKS

Are the most popular and attractive Poetry Books published.

- | | | |
|-----------------------------|------------------------------|-----------------------------|
| BOOK I, 16 pp., 1d. | BOOK III, 52 pp., 2d. | BOOK V, 64 pp., 4d. |
| BOOK II, 16 pp., 1d. | BOOK IV, 48 pp., 3d. | BOOK VI, 64 pp., 4d. |

AN INTRODUCTION TO THE STUDY OF SHAKESPEARE AND MILTON, containing Classified Selections, with full Notes, Sketches of the Lives and Genius of the Poets, Critical Analysis of their Language and Style. With Illustrations by Sir JOHN GILBERT and WILLIAM SMALL. Crown 8vo, handsomely bound in cloth, 1s. 6d.

Also, uniform with the above,

AN INTRODUCTION TO THE STUDY OF SHAKESPEARE, with Life, Notes, &c. &c. Crown 8vo, Illustrated, 6d.

AN INTRODUCTION TO THE STUDY OF MILTON, with Life, Notes, &c. &c. Crown 8vo, with several fine Illustrations, 6d.

Crown 8vo, strongly bound in cloth, price 3s. 6d.

ADVANCED ARITHMETIC FOR SCHOOLS AND COLLEGES, with Answers, by THOMAS W. PIPER, late Normal Master and Lecturer in the National Society's Training College, Battersea.

In ordinary Text-books of Arithmetic, the Rule comes first, the Illustration of the Rule follows, and the Reason of the Process appears last. But in the present work, the reverse and more truly scientific order is followed—*ae.*, the Reasons are presented first, then the formal working of the Example, so arranged that each step is self-evident; and lastly, the Rule, as a convenient summary of the methods employed in working out the example.

Another characteristic of the "Advanced Arithmetic," which distinguishes it from similar works, is its completeness. Though designed for advanced students, the elementary portion of the subject is fully explained and illustrated, but in a more scientific manner than would be practicable in a professedly elementary arithmetic, while the higher and more difficult rules are still more amply elucidated by copious explanation, numerous examples worked out in full, and carefully selected exercises and examination questions.

BY THE SAME AUTHOR.

A COMPLETE COURSE OF ARITHMETICAL EXAMPLES AND EXERCISES, designed to accompany the "Advanced Arithmetic," but may be used with any other Arithmetical Text-book. With Answers. Crown 8vo, cloth, 3s.

ELEMENTARY TREATISE ON ARITHMETIC, for Schools and Colleges. Crown 8vo, cloth, 1s. 6d.

"The author's endeavour to make the study of Arithmetic what it ought to be,—a thorough mental training,—is apparent on every page."—*Teacher's Assistant*.

MENTAL ARITHMETIC, containing Rules and Exercises founded on Examination Papers. *New and Enlarged Edition*. Foolscap 8vo, cloth, 2s.

"Has had a deserved success."—*School Guardian*.

"Contains an excellent collection of examples."—*Scholastic World*.

INTRODUCTORY MENTAL ARITHMETIC, being a short Exposition of the uses of Mental Arithmetic, with illustrative examples and a great number of New and Original Exercises. Foolscap 8vo, stiff cover, 6d.

"A valuable little work."—*Scholastic World*.

Crown 8vo, cloth, price 3s. 6d.

THE ELEMENTS OF EUCLID FOR SCHOOLS AND

COLLEGES, containing the First Six, and those parts of the Eleventh and Twelfth Books which are usually read at the Universities, together with a valuable selection of Geometrical Problems for solution. By JAMES MARTIN, Head Master of the Endowed School, Wedgwood Institute, Burslem.

(1.) In all the propositions, a clear line of demarcation is drawn between the Construction and the Proof or Demonstration. (2.) By a typographical expedient the several steps in the reasoning are clearly shown. (3.) In describing the figures, those parts which are given in the enunciation are represented by dark lines, and those which are added in the course of the demonstration by dotted lines. (4.) In all cases the figure has been repeated wherever it was found necessary.

THE ELEMENTS OF EUCLID, with a Selection of Geometrical Problems for Solution. Crown 8vo, Book I., cloth, 1s.; Books I. and II., 1s. 6d.

A GRADUATED COURSE OF PROBLEMS IN PRACTICAL PLANE AND SOLID GEOMETRY. By JAMES MARTIN. Crown 8vo, cloth, price 3s. 6d.

Special attention is directed to the characteristic features of this work:—

1. In the Introductory section full particulars are given of the various drawing instruments, and the manner of using them, together with general hints on Drawing.

2. The Problems in "Plane Geometry," though exceedingly numerous, are classified in sections.

3. The Diagrams are engraved with extreme care, and for the sake of clearness, three kinds of lines are used, viz. :—

(1.) Thin lines, representing those which are given.

(2.) Dotted lines, showing those used in the construction of the figure.

(3.) Thick lines, representing the solution of the problem.

4. By a typographical expedient, the two cardinal ideas, viz.—what is given, and what is to be done—are clearly shown in the enunciation.

5. The Problems in "Solid Geometry" are also carefully graduated, and arranged in sections.

6. An exhaustive section on the derivation of Geometrical problems.

7. A complete Index of all the Problems in both parts of the work.

FIRST GRADE PRACTICAL GEOMETRY. By DAVID

BAIN, F.R.G.S. Containing (a) all the necessary problems fully worked out; (b) test exercises on the same; (c) a series of graduated exercises for copying; and (d) all the First Grade Examination Papers given by the Department during the last three years. Crown 8vo, stiff covers, price 3d.

ACOUSTICS, LIGHT, AND HEAT, intended as an Introduction to the Study of Physical Science. Adapted to the requirements of the Science and Art Department, by T. W. PIPER, late Normal Master, St. John's College, Battersea. Crown 8vo, cloth, with numerous illustrations, price 2s. 6d.

"The work is so well done, that the non-scientific reader can hardly fail to derive much pleasure from it, while to the science teacher it will be invaluable."—*School Guardian*

"By far the best and clearest elementary treatise on the subject."—*The Principal, Training College, York.*

"Mr. Piper's book is the result of hard work and competent knowledge, both of the subject, and, what is all too frequently ignored in our school books, how to teach it."—*The Principal, Training College, Whitelands.*

"Very complete hand-book . . . commences with facts that are almost self-evident, stated in the simplest terms, and gradually, by slow but consecutive stages, passes to the more complex phenomena."—*Iron.*

CLASS-BOOK OF INORGANIC CHEMISTRY. By

D. MORRIS, B.A., late Teacher of Chemistry in Liverpool College.
New and Enlarged Edition. Crown 8vo, price 2s. 6d.

"A capital hand-book for students reading for the University examinations"—*School Guardian.*

"To the student in chemistry who wishes to get possession of the greatest possible number of facts in a given time, the book will be eminently useful."—*British Mail.*

"Brimful of accurate information, brought up to the latest date."—*The Teacher.*

CLASS-BOOK OF ELEMENTARY MECHANICS,

an Introduction to Natural Philosophy. By W. HEWITT, B.Sc., Science Demonstrator for the Liverpool School Board. Crown 8vo, cloth, 3s., or in Parts—Part I. 1s. 6d.; Part II. 2s.

"It is very pleasant to meet with a book so fresh, so thorough, and so simple. . . . The book before us is the outcome of the thought of a practical teacher, and of a clear and logical mind. The questions at the end of each chapter are extremely well chosen. The good taste shown in the get-up of the book, the clearness of the type, &c., are worthy of the excellent manner in which Mr. Hewitt has treated his subject."—*Schoolmaster.*

"The exercises are a very praiseworthy part of Mr. Hewitt's work. . . . Common incidents, which through their very commonness are deemed insignificant, are here made the vehicle of most important instruction."—*Practical Teacher.*

"We have seldom met with a really elementary book which at once combined to so great a degree simplicity of language, accuracy of description, and sound science."—*Nature.*

CLASS-BOOK OF ELEMENTARY GEOLOGY. By

F. WOLLASTON HUTTON, F.G.S. Extra foolscap 8vo, cloth, price 1s. 6d.

"This little work is a systematic and complete résumé of the subject, and is specially adapted for beginners."

TAYLOR'S MUTATION SINGING METHOD.

Endorsed and recommended by Educationists of experience and position, including Training College Authorities, Her Majesty's Inspectors and Assistant Inspectors of Schools, Musical Professors, Teachers, &c., well as important London and Provincial Journals.

LEADING PUBLICATIONS OF THE METHOD.

Crown 8vo, bound in cloth, price 1s. 6d.

A MANUAL OF VOCAL MUSIC.

For Use in Schools and Colleges, forming

A COMPLETE GUIDE TO SINGING AT SIGHT FROM NOTES.

Crown 8vo, strongly bound in cloth, price 6s.

THE STUDENT'S TEXT-BOOK OF THE SCIENCE OF MUSIC.

A Full Treatment, upon an Original Plan, of Musical Theory, Notation, Harmony, Counterpoint, Fugue, Score, Composition, and the complete range of Musical Science, with exhaustive Tables, Glossaries, Index, &c. By JOHN TAYLOR.

"Harmony and counterpoint admirable."—*Daily Telegraph*.

"If the science of music can be learned from a book, this will teach it."

—*Bookseller*.

PRINTED IN TWO COLOURS.

PHILIPS' MUSIC SHEETS,

For Use in Connection with "Taylor's Manual of Vocal Music,"
and for General Purposes of Musical Instruction.

- The Set, complete in 15 large Sheets, size 33 by 44 in., price 30s.;
• Or mounted on Cloth, with wooden ledge, for Class Teaching, £2, 12s. 6d.
• Separate Sheets, price 2s. 6d. each;
• Or mounted on Rollers and Varnished, price 5s. each.

Specimen copies of Philips' Class-Books, Atlases, &c., for examination with a view to introduction, will be sent post free to Head Teachers on receipt of half the published price.

LONDON: GEORGE PHILIP & SON, 32 FLEET STREET, E.C.

LIVERPOOL: CAXTON BUILDINGS, AND 49 & 51 SOUTH CASTLE STREET.

5
270